

**PATHWAYS TO MALADJUSTMENT AND RESILIENCE IN INNER-CITY  
MINORITY YOUTH: EXAMINING ACADEMIC FAILURE AND HOPELESSNESS AS  
MEDIATORS BETWEEN CONTEXTUAL RISK FACTORS AND CHILD  
MALADJUSTMENT FROM A DEVELOPMENTAL PSYCHOPATHOLOGY  
PERSPECTIVE**

by

**Brandi M. Jones**

B.S. in Psychology, Indiana University, 2001

M.S. in Psychology, University of Pittsburgh, 2004

Submitted to the Graduate Faculty of  
Arts and Sciences in partial fulfillment  
of the requirements for the degree of  
PhD in Clinical and Developmental Psychology

University of Pittsburgh

2008

UNIVERSITY OF PITTSBURGH

ARTS AND SCIENCES

This dissertation was presented

by

Brandi M. Jones

It was defended on

June 20, 2008

and approved by

Robert B. McCall, PhD, Professor

Susan B. Campbell, PhD, Professor

Daniel S. Shaw, PhD, Professor

JeeWon Cheong, PhD, Assistant Professor

Janet W. Schofield, PhD, Professor

Ralph L. Bangs, PhD, Professor

Dissertation Chair: Robert B. McCall, PhD, Professor

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Literature has consistently documented links between contextual factors and developmental outcomes in inner city youth. Most of these associations, however, have been cross-sectional in nature. Furthermore, there is only a limited understanding of the pathways contributing to maladjustment and resilience in this population. While ethnographic studies have taken into account factors of academic failure and hopelessness, quantitative studies have lagged. The present study examines these issues by addressing the main question of how the experiences of low-income, African-American children contribute to later maladjustment or resilience, focusing on academic failure and hopelessness as significant mediators in the pathway to later outcomes.

Specific aims of the proposed study are to determine whether 1) a hypothesized mediational model of the development of inner-city minority youth is supported as a better fit for the data from a multicohort, longitudinal study, than competing non-mediational models, 2) gender, religiosity, extracurricular involvement, and affiliation with prosocial peers moderate the associations specified within the model, and 3) there is a subgroup within this larger sample with

higher levels of hopelessness who are significantly more likely to suffer from the risks and outcomes in the model as compared to their lower hopelessness counterparts.

The following document begins with an introduction to outcomes in this population and links between contextual factors and outcomes. This is followed by a section devoted to academic failure and hopelessness as mediators, beginning with a description of why one would expect these to function as contributors to later maladjustment. As a conceptual framework, a model of the development of inner-city youth is presented, and each of its components included in the current study is described. Following this is a section that describes methodological improvements of the current study over existing research, including developmental considerations, multiple domains of risks, and mechanisms driving the associations. Primary questions are stated next. The methods section of the document then identifies the sample and describes the study procedures. Lastly, the results section outlines the findings from the completed analyses, followed by the conclusion which revisits the questions and the results from the current study and suggests directions for future researchers.

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## **PREFACE**

This project could not have been successfully completed without encouragement and feedback from my committee members and other graduate faculty. A special thanks is extended to John Bolland, PhD, as well, for the permitted use of the data utilized in the current study. A final thank you is given to my family and friends for their continued love and support throughout this endeavor.

## **1.0 INTRODUCTION**

Adolescence is a crucial transition point at which young men and women are on the cusp of adulthood and become fully accountable for their actions and their futures. Depending on a number of ecological factors, some youth may feel less prepared for these responsibilities than others. Scholars tend to agree that various early and ongoing contextual risk factors can contribute to maladjustment in youth (e.g., Hooper et al., 1998). Additionally, many researchers have recognized that these risk factors are abundant in inner-city populations. Consequently, as would be expected, the literature suggests that there are high rates of negative outcomes for children living in these environments, including school dropout, externalizing and internalizing problems, and high arrest and recidivism rates (e.g., Bolland, 2003). While a number of cross-sectional and a few longitudinal studies have examined the associations between the risks and outcomes, the mechanism via which these risks translate into later maladjustment in inner-city youth remains uncertain. What is also unclear is how the competing protective factors in these contexts operate to promote resiliency in children faced with poor rearing environments.

Examination of ethnographic literature and, more recently, empirical studies of this group of children have prompted the consideration of two likely mediating factors, namely, academic failure and hopelessness. Although Garcia-Coll and Garrido (2000) constructed a model of development of minority children, most, if not all, of the models of development in this population have failed to adequately include these two areas, despite the high prevalence of each

in the lives of inner-city children. Exclusion of these factors at a conceptual level has also led to an exclusion of these factors at an empirical level. Of the modest number of available quantitative studies examining process level variables in this population, the simultaneous exploration of both of these intervening factors is virtually non-existent. Arguably, this gap in the literature considerably decreases our understanding of existing findings linking both distal and proximal domains of development to child outcomes and lessens the effectiveness of our applied efforts. More specifically, if academic failure and hopelessness are viewed as mediators between early contextual risk factors and adolescent developmental outcomes in inner-city youth, we can better explain why these youths have increased levels of negative behavior. Even more importantly, examining factors that can mitigate some of the effects of these early and persistent stressors may lead to a better understanding of how to intervene to decrease the levels of maladjustment in this group.

## **1.1 CONTEXTUAL VIEW OF CHILD DEVELOPMENT**

The literature indicates a general agreement among researchers that child development is not merely a product of the child's biology and immediate experiences but is a process influenced at many contextual levels by a number of factors. Bronfenbrenner (1986) proposed a comprehensive, concentric model of the child's developmental contexts. At the core is a focus on the child and his or her evolutionary heritage. It suggests the child has a strong disposition to act on the environment, an innate propensity for learning, and a predisposition to be social. One level out is the immediate context, which consists of the family system that serves to stimulate language development and other cognitive skills and provides the first opportunity for the child

to form social relationships and observe models for behavior. Going out another level brings one to the neighborhood context, which generally refers to geographically proximal people who often share similar occupational, educational, and economic characteristics (Santrock, 1998); this context is also typically associated with childrearing practices due to various living conditions. Last is the cultural context, which contributes to differences in socialization processes of what is valued, adaptive, and emphasized within a culture (Zigler et al., 1993; Lee et al., 2003).

While Bronfenbrenner's model is relatively "universal" in that it describes development across populations of children, other researchers have focused on significantly distinct cultural variations that make the experiences of certain groups of individuals qualitatively different, and thus, in need of a revised model that encapsulates these experiences, while continuing to look across multiple contextual domains. One example of this is that of Garcia-Coll and Garrido (2000), who proposed a model of development that is more specifically geared toward minority youth, in which they include domains such as societal variables, child and family characteristics, promoting and inhibiting factors, adaptive cultures, and developmental competencies.

Regardless of the theoretical approach taken, there is recognition that, operating within each contextual domain of development, there are certain factors that can significantly alter the course of development for many individuals. There are factors that serve to undermine the adequate development of the children facing them; they are often referred to as risks. Some of the risk factors previously identified as disproportionately affecting inner-city youth include poverty or low-SES, maternal psychopathology, poor parenting attitudes and practices, minority ethnic status, family composition, stressful life events (Hooper et al., 1998), parental cognitions and expectations, and neighborhood characteristics (Ceballo et al., 2002). Conversely, there also seem to be factors, such as social support, paternal involvement, and religiosity that optimize the

development of children even in the poorest of conditions. Before elaborating on the relevance of the risk and protective factors as they pertain to the current study, it is important to briefly consider the characteristics of a group notably influenced by these factors and the environment that shapes them from their ethnographically documented perspective.

## **1.2 QUALITATIVE OVERVIEW OF INNER-CITY ENVIRONMENTS**

Many children are faced with constraints that interfere with normative development, but not many more than inner-city youth. Ethnographies have well documented the “culture” of this population (e.g., Hrabowski, Maton, & Greif, 1998; McLaughlin, Irby, & Langman, 1994). According to these sources, as a result of a number of societal ills, including racism and discrimination, pockets of poverty have been created that are characterized by a number of neighborhood risks. Generally, the families residing within these neighborhoods are minority families who are attempting to prepare their children for their current environments, while also making them aware of an unaccepting mainstream culture with a different set of valued ideas and behaviors. So, these children learn from an early age that their previously adaptive competencies and attitudes are neither appreciated nor adaptive outside of their familiar community walls. Consequently, these individuals strive to cope with feelings of despair and hopelessness that stem from their realization of the undeniable odds against their achieving success via mainstream means (Wilson & Aponte, 1985). As a result, an appreciable number of African-American adolescents living in inner-city, high-poverty neighborhoods in the US suffer developmental difficulties including behavior problems, depression, early sexual activity, and poor school performance (Pittman & Chase-Lansdale, 2001). Thus, the task becomes identifying the specific



factors present in these environments that contribute to the poor outcomes in this group, as well as the buffers that protect some members from the deleterious effects of these risks.

### **1.3 A PROCESS-LEVEL EXAMINATION OF THE DEVELOPMENT OF INNER-CITY, MINORITY YOUTH**

As previously stated, the development of inner-city youth can be influenced by a number of contextual factors. The goal then becomes identifying the ways in which these factors exert these influences. This is explored in the following sections by first defining risk in this population. The next step is to highlight the associations between these contextual factors and child maladjustment as evidenced by cross-sectional, and, where possible, longitudinal studies. The discussion then turns to the underlying mechanisms driving these associations, focusing first on the links among the various contextual factors, and then on the mediation of these factors and outcomes by academic failure and hopelessness, as illustrated in an integrative model of the development of hopelessness in inner-city, minority youth ([Figure A1](#)). The introduction concludes by examining the factors that serve to facilitate more optimal child development in this population.

### **1.3.1 Conceptualization of risks**

There are a number of factors that potentially can lead to maladaptive outcomes for children in disadvantaged environments. Garmezy suggested that a risk factor is “an element, which, if present, increases the likelihood of developing emotional or behavioral disorders in children compared to a randomly selected sample of a normal population” (Grizenko et al., 1992). Many researchers have found that these risk factors do not occur in isolation from one another (Seifer et al., 1992), and that there are modest correlations between most of these risks (Burchinal et al., 2000). Thus, research has often focused on examining the accumulation of risk factors, which has been demonstrated to have a serious impact on the cognitive and socio-emotional outcomes in children (Seifer et al., 1992). This study utilizes a similar approach, focusing on the cascading influences of early environmental deprivation on later maladjustment. Each of the following factors is deemed neither necessary nor sufficient for early academic failure or the development of hopelessness and subsequent poor outcomes but as contributing to later maladjustment; academic failure and hopelessness are viewed to be the result of an accumulation of these factors over the course of development, in the absence of buffering factors to promote resilience. It is worth noting that while many of these factors are presumed to exert effects early in development, many are considered both acute and chronic (i.e., they can continue to influence the course of development over time, possibly manifesting themselves in different ways and presumably creating different effects at different stages of development).

### **1.3.2 Research linking contextual risks and outcomes**

**1.3.2.1 Societal risk** Development is situated in a culturally ordered context. There are a large number of societal factors, such as values, politics, and mass media, that can indirectly influence development. Some of the most important societal factors, however, are structural characteristics. Ogbu (as cited by Spencer, 1987) refers to the “double stratification” of individuals on the basis of race and class membership, which places African Americans at a dual disadvantage because they are often located on the lowest tier of both classifications. To quantify the disparities of ethnic minority representation in the lower SES, 54% of African-American and 44% of Hispanic but only 15% of White children live below the poverty threshold (Smokowski et al., 1999). While other minority groups also suffer from these inequalities, for African Americans, in particular, oppression within American society makes their experience qualitatively different from other ethnic groups that have immigrated to the US (Spencer, 1987).

**1.3.2.2 Neighborhood risk** At a less global level, neighborhoods also appear to affect children’s development. As a child grows, his or her world expands, and neighborhoods become an increasingly important developmental context for children to acquire the skills necessary for normative development. For example, neighborhoods play a vital role in cognitive socialization (Keating, 1990); that is, neighborhoods, both people and institutions, illustrate the influence of social environment on cognitive skills. Extrafamilial relationships, in the neighborhood and/or in the school, are also critical in the developmental process, in that they serve as a forum for older children to exercise their logical thinking skills, develop their moral reasoning, and assist in self-understanding and identity formation.

Unfortunately, as a result of societal ills, the neighborhood conditions and opportunities afforded to a number of children are sub-par, particularly in inner-city environments. Portrayals of lower class life paint a picture that is not limited to economic deprivation; they present an image of individuals not only constantly preoccupied with not having the resources necessary for physical and social survival, but who are also rooted in feelings of frustration and apathy because of an inability to constructively handle an uninviting society. The culture that has emerged in this “Black underclass” is one that has seemingly adapted to its characteristics of drugs, crime, illiteracy, poverty, and a high proportion of female-headed families on welfare as well as one of the highest infant mortality rates in the country (Stark, 1993). Professor Cornell West (as cited by Stark, 1993) encapsulated these sentiments when he referred to the underclass of African-American youth as a “walking nihilism of pervasive drug addiction, alcoholism, homicide, and suicide.” As with societal factors, there have been empirical links corroborating the ethnographic reports of the devastation incurred from these subpar proximal environments. Durlak (1998) identified community-level variables as being related to child adjustment difficulties. One example is from Prelow et al. (2004), who found that neighborhood disadvantage was associated with depressive symptoms and delinquency in their sample of African-American and Euro-American high school students. Ecological research in numerous cities has shown that many social problems (e.g., crime, delinquency, drug use, public disorder, and school drop-out) are significantly clustered in neighborhoods of concentrated poverty and family instability (Duncan, Duncan, Okut, Strycker, & Hix-Small, 2003). Additionally, existing research suggests that children growing up in impoverished or violent communities may be at increased risk for both internalizing and externalizing symptomatology (Aneshensel & Succo, 1996; Garbarino &

Kostelny, 1996; McLeod & Edwards, 1995; McLeod & Shanahan, 1993; Robins, 1991; Jencks & Meyer, 1990).

While neighborhood quality can be viewed as a general composite of neighborhood risk, it also can be made objective through a number of different lenses, with some researchers focusing on poverty levels, some on crime/violence exposure, and still others on instrumental and/or social resources or on neighborhood cohesion. One example comes from Chase-Lansdale and Gordon (1996) who report that structural aspects of neighborhoods were associated with child development in early school age, including cognitive and social outcomes, even after controlling for family factors.

Regarding the financial aspects of the neighborhood context, data consistently have shown that African-American and Hispanic elementary school-age children residing in impoverished environments have an increased risk of experiencing emotional and behavior difficulties (e.g., Ceballo, 2002; Greenberg et al., 1999; Klein et al., 2000), general parent-reported mental health problems (Xue, Leventhal, Brooks-Gunn, & Earls, 2005), and higher levels of concurrent and later aggression (Attar, Guerra, & Tolan, 1994).

Neighborhood collective efficacy generally refers to neighborhood characteristics of cohesion, social control, and organization, which can be positive factors when present in communities; this is not often the case, however, in many inner-city environments. Perceptions of neighborhood disorganization in seventh grade predicted increased tobacco, alcohol, and marijuana use in ninth grade (Lambert, Brown, Phillips, & Ialongo, 2004). Results for other externalizing problems were also found in Johnson, Jang, De Li, and Larson's (2000) sample of African-American adolescents. For example, neighborhood disorder was significantly associated with the rate of serious crime among this group.

The last neighborhood variable – neighborhood crime and violence – seemingly are two of the most influential and well-researched neighborhood factors that are related to child outcomes, in part, due to their high prevalence in these communities. In studies cited by Randolph, Koblinsky, and Roberts (1996), it was found that 91% of the 9-12 year olds surveyed in a New Orleans sample reported that they witnessed some type of violent act and over half had been victimized themselves, findings comparable to another sample they cited that included 5<sup>th</sup> and 6<sup>th</sup> graders in Washington, D.C. Recent studies have examined the effects of violence exposure on children's behavior, and they clearly suggest a link between exposure to violence and a host of cognitive and behavioral problems, including regression and depression; exaggerated levels of fear and anxiety; denial and emotional numbing; impairments in school performance, memory, and concentration; and aggressive acting out and poor impulse control across ages in this population (Bell, 1993).

A number of studies have been conducted in this population regarding neighborhood violence. Plybon and Kliwer (2002) found in their sample of predominantly African-American urban children that those living in very poor neighborhoods with moderate crime levels had more behavior problems than children living in relatively low crime, low poverty areas; although, as so often is the case, it is difficult to tease apart the effects of crime and those of poverty, which frequently co-occur. Additionally, it has been found that exposure to violence and personal victimization are associated with self-reported violent behavior and childhood depressive symptoms (DuRant, Cadenhead, Pendergrast, Slavens, & Linder, 1994; DuRant, Getts, Cadenhead, Emans, & Woods, 1995; Fitzpatrick et al., 2005; Simons et al., 2002), and increased fears, anxiety, and internalizing problems in African-American high school students (Cooley-Quille, Boyd, Frantz, & Walsh, 2001).

**1.3.2.3 Family risk** As we zoom in on a smaller unit of analysis, the focus shifts to the families living in and being influenced by their neighborhoods. With an emphasis on child development, the role of the family becomes central, because at young ages it is often a child's entire social and interactive world (Hayden et al., 1998). Thus, if problems exist in family interactions and coping competence, these problems may be felt more intensely by the preschool child who has minimal exposure to potentially more supportive, positive non-familial environments (Weiss et al., 1999). As a child matures, however, the family context can remain very influential, because there is an increased shift toward autonomy and increased familial conflicts over mundane issues (Steinberg, 1989).

There are a number of risk factors that fall under this domain. To understand how family risk influences children's outcomes, it is important to look at the contribution of subcategories of well-studied family risks, primarily sociodemographics and family context variables (Barocas, Seifer, & Sameroff, 1985). There is a large body of literature that suggests these factors are related to child maladjustment (e.g., Krishnakumar and Black, 2002; Sameroff et al, 1983).

The first subcategory of family risk is sociodemographics. This area is associated with the quality of physical care received by the child, as well as the overall quality of the home environment. Evidence is quite clear that SES measures correlated with family income are associated with preschool children's developmental scores, and these relations can be seen at least by ages 4 and 5, but possibly earlier (Klebanov et al., 1998). Poverty, often defined by a federal poverty threshold, seems to worsen any negative effects (Santrock, 1998). Family poverty has been linked to a variety of socioemotional problems and cognitive delay in African-American children of varying ages (e.g., Burchinal et al., 2000; Linver, Brooks-Gunn, Kohen, 2002; McLoyd, 1990). Lewis described the "culture of poverty" as "both an adaptation and a

reaction of the poor to their marginal position in a class-stratified, highly individuated, capitalistic society” (1968;188).

Within the second subcategory of risk, there are a number of family factors, such as parent-child interactions and parenting variables that convey a general sense of family dynamics and family functioning. Rather than explore these constructs separately, these domains will be considered, in brief, under the heading of “family context variables.”

Among the dimensions of parenting found to be relevant for child mental health, warmth, control, effectiveness, consistency, neglect, and harshness of discipline have been linked with outcomes both concurrently and longitudinally. In a sample of African-American dyads of mothers and their adolescent daughters, Pittman and Chase-Lansdale (2001) found that maternal disengagement was positively associated with externalizing, internalizing, academic performance, sexual history, pregnancy history, and work orientation. Additionally, family control and harsh discipline and less nurturant parenting have been associated with increased externalizing scores and conduct problems in younger African-American boys (Florsheim et al., 1996; Sameroff et al., 2004), and uninvolved parenting was associated with childhood depressive symptoms in a sample of African-American 10-12-year olds (Simons et al., 2002a). Most recently, parenting process, particularly the affective relationship between caregivers and their adolescents and disciplinary practices, also were found to relate to children’s later engagement in health-compromising and violent behaviors, with poorer parent-child relationships associating with later maladjustment (Vazsonyi, Pickering, & Bolland, 2006).

**1.3.2.4 Child risk** We can recognize the child as an agent existing within the system of the family, making some unique contributions to his or her development. In defining the



developmental risk associated with a specific child, “the characteristics of the child must be related to the ability of the environment to regulate the development of that child toward social norms. In extreme cases of biological abnormality, such regulations may be ineffectual. At the other extreme, disordered social environments might convert biologically normal infants into caretaking casualties” (Sameroff et al., 1983).

Although children are only one small unit in the entire family structure, they can contribute significantly to family functioning and dynamics in various ways as a function of their temperament, cognitive processes, and their developmental competencies. It is worth noting that while gender is another highly important child characteristic, because the hopelessness literature has not clearly defined gender differences, general hypotheses about gender’s differential effects on the various aspects of the model would be premature. However, data, when available, will be presented in the various contextual and outcome domains. Likewise, although temperament is an important construct because of its influence on family dynamics and other contextual domains, it is not included in the model and will not be explored here. Thus, child risk, as it pertains to the current model, will focus predominantly on child cognitions (i.e., beliefs and attitudes).

Often when examining the influence of cognitive factors on child development, researchers tend to hone in on attributional styles. In keeping with the current study, however, are those examining expectations and aspirations because they are often diminished in this population and, along with an external locus of control, are presumably associated with hopelessness and later maladjustment. It is necessary to underscore that while hopelessness also is a cognition, it is expected to stem from and temporally follow the other cognitions, after the influence of early academic failure. Thus, because it is viewed as a primary mediator in the current study, unlike the other cognitions, it is considered separately.

Expectation of early death and an attitude of giving up was a recurring theme in a number of ethnographies. Children were frequently quoted as making fatalistic statements and displaying attitudes of indifference (Holzman, 1996; Kotlowitz, 1987). Consistent with the aforementioned findings are those by Greene (1993). In his interviews with inner-city youths, he noted that “it seemed common for teens growing up in poverty and around violence to question whether they will survive into adulthood.” He concluded that poverty and violence may obliterate an adolescent’s sense of safety, security, and hope, leaving little room for long-term aspirations and planning.

Attributions also have been explored in this population. While the suggestion frequently has been made that African Americans are more external in their attributions, Graham (1994) suggests that the research does not substantiate this claim. More specifically, in her review of motivation and African-American achievement-related behavior, she reported that the current literature is inconclusive as to whether African Americans are more likely than White youth to endorse external and/or uncontrollable causes for achievement; “there are just as many studies that do not show greater externality among Blacks as studies that do.” The discrepancy appears to lie in methodological issues and seems to depend on how one conceptualizes locus of control. The age of the child, as well as SES, also merit attention as possible moderators of the relations and may obscure findings. She also argues that there is a lack of evidence that externality has maladaptive consequences in this population.

More recent exploration, however, suggests the need to consider the type of event (i.e., positive or negative) to explain previous inconsistencies in the literature, and it provides evidence in support of the assertions that African Americans are more external in their attributions, particularly about negative events. Hillman et al. (1994) reported that in their sample

of at-risk African-American adolescents, attributions ascribed to positive events were significantly more internal, stable, and global than the attributions for negative events. It may be that external attributions serve a positive function by allowing African Americans to attribute poor performance to external factors, which protects self-esteem, explaining why these youth generally display healthy levels of self-esteem despite failures. To elaborate, Van Laar (2000) suggests that “disidentification” is a way for academic achievement to become dissociated from self-esteem (i.e., an external attribution model predicts that self-esteem will be maintained, while expectancies will be low, but motivation for performance will persist, and there will be system blame and social anger). Thus, there are benefits to this cognitive style; however, there also have been negative repercussions associated with these feelings of uncontrollability. Samples (1997) found a significant relation between cognitive style and use of an aggressive strategy. Meta-analysis also indicated a strong relation between attributional composites (e.g., internal, stable, and global cognitive styles) and self-reported depression in a general population of youth (Joiner & Wagner, 1995).

**1.3.2.5 Mediating risk factors** Two factors, academic failure and hopelessness, are not only outcomes of interest, but they also contribute to later negative outcomes. Because of their inclusion as mediating factors in the model to be tested, however, they will not be explored here, but instead, will be discussed in subsequent sections that examine both the influence on these factors from other risks and the subsequent influence of these factors on later outcomes.

### 1.3.3 Pathways to maladjustment

Evidence has been presented that a number of risks at each developmental level contribute to child adjustment, but the specific means by which these factors are translated into positive or negative outcomes have not been discussed (Barocas et al., 1985). Coll, Crnic, Lamberty, Wasik, Jenkins, Vazquez-Garcia et al. (1996) highlighted the scarcity of literature on processes underlying the developmental outcomes of minority youth and the minimization of the role of social position variables, “[which omits] a lot of information regarding contextual influences on minority child development.” In an effort to better understand the contributions of various contextual risk and protective factors on inner-city, minority youth development, an integrative model of the development in this population was previously proposed by the author (Jones, 2006; [Figure A1](#)). Utilizing features from the models of Bronfenbrenner (1986) and Garcia-Coll and Garrido (2000), the model provides a process-level view of how early contextual factors can create later maladjustment in minority children reared in inner-city environments. The current hypothesized mediational model ([Figure A2](#)) draws from this more comprehensive model, focusing only on factors available for empirical investigation with the current dataset. Since the links between risks and outcomes have already been specified, they will not be reiterated here. Instead, the suggested mediation of these associations will be presented by examining the associations between the risks and proposed mediators (i.e., academic failure and hopelessness) and the associations between the mediators and the specified outcomes. This will be followed by an elaboration on each of the hypothesized links included in the model.

**1.3.3.1 Characteristics of the integrative mediational model** This comprehensive model, on which the simplified model being tested in the current study is based, delineates associations

among early contextual risks as well as their association with later developmental outcomes. Additionally, academic failure and hopelessness are viewed as mediators of these relations. More specifically, the model begins with the effects of the social position variables on neighborhood, and then turns to the influence of neighborhood context on family socialization practices and family functioning. These variables, along with child characteristics, are then presented as factors contributing to poor school readiness and early academic failure in inner-city youth. These child characteristics (i.e., attitudes and beliefs) and early school failure are presumably related to subsequent feelings of hopelessness. The remaining paths in the model explore the possible longer-term outcomes stemming from academic failure and hopelessness, with some children experiencing internalizing problems and some engaging in risky behaviors (i.e., externalizing problems). Additionally, there are some who, despite their misfortune, manage to attain success much like their counterparts who were not reared in the same environment. Thus, potential moderators, such as affiliation with prosocial peers, extracurricular participation, and religion also are considered as contributors to resiliency. It should be noted that in this integrative model, there is a temporal connection and chain in linking the contextual variables to one another and then to later outcomes, as opposed to considering the contextual risks as co-occurring even though this is how they are presented in the testable version of the model.

One positive aspect of this model is that it employs a developmental psychopathology perspective to the study of academic failure and hopelessness in inner-city youth. The developmental psychopathology perspective, introduced about two decades ago, provides the means to address some of the limitations of the existing literature. The crux of the developmental psychopathology perspective is that one considers individual differences in development, as opposed to merely focusing on normative development (Cicchetti, 1986). By comparing

normative development with the development of individuals or groups subjected to a set of risk factors, we can determine the detrimental outcomes associated with the risks. Additionally, along with understanding the influence of the risks, we can better understand the role of protective factors and how some individuals who were exposed to the same detrimental risk factors as their peers go on to look similar to those individuals in the normative groups.

Also consistent with the developmental psychopathology perspective, the currently proposed model permits consideration of child risks and outcomes from a transactional framework. Sameroff and Chandler's transactional model describes development in such a way that "both the child and the environment are seen as actively engaged with each other, changing and being changed by their interactions" (Sameroff & Seifer, 1983). One of the important aspects of this model is that it incorporates changes in risk factors over time, along with the corresponding changes in developmental outcomes across time.

**1.3.3.2 Academic failure and hopelessness as mediators of risks and outcomes** For mediation to occur, three conditions must be met. Links must be established between the contextual factors and the outcomes of interest, namely, internalizing problems and externalizing problems. Empirical support already has been provided to support the first criterion. If academic failure and hopelessness are to serve as mediators of these relations, not only must they be related to the contextual factors and the developmental outcomes, the relation between the contextual factors and outcomes must diminish when academic failure and hopelessness are included in the equation (Baron & Kenny, 1986). Due to the paucity of research in this area, the second and third conditions are more theoretical in nature and serve as the impetus for the completion of the

current study; the sparse literature that is available, however, will be presented to substantiate the claims made in the model.

There is often a cultural mismatch that exists between teachers and students in terms of communication styles, values, and expectations, and discrepancies exist between what constitutes adaptive behavior at home versus those things viewed as adaptive at school (Schofield, Wang, & Chew, 2007). The cultural values of the student (affect, harmonic interdependence, movement expressiveness, and communalism) and the mainstream (logic over feelings, compartmentalization and separateness, movement compressiveness (i.e., containment), and self-contained individualism) often are in conflict (Allen & Boykin, 1992). This cultural mismatch has been supported by adoption research that shows that African-American adoptees reared in White families as compared to those reared in African-American families have higher academic performance, even after controlling for a number of early sociodemographic factors (Moore, 1987). Thus, as a result of this mismatch African-American children enter schools that are “totally unprepared for them and not ready to help them overcome the many barriers that have permeated their young lives” (Swick & Brown, 1994).

There is a longstanding achievement gap between White and African-American children, even after controlling for socioeconomic factors (Schofield et al, 2007), which is problematic, given that Americans view education as the primary means for redressing inequality in social life. Garibaldi (1992) has reported that for African-American youth, males in particular, there are low academic achievement findings as early as second grade. It has been reported that 16% of the high school population nationwide is African-American males, yet they account for about 60% of all dropouts nationwide. It also has been found that African Americans account for a disproportionate rate of retentions, suspensions, and expulsions. Academic achievement and

graduation rates in large, urban areas are often low; in the worst cases, less than one quarter of the student body reaches 12<sup>th</sup> grade on time (Jordan & Cooper, 2003). The questions that remain are why, and what does this mean for longer-term adjustment in these youth.

As has been shown, there are a number of factors influencing child internalizing and externalizing problems, as is also true with academic problems. Academic problems have been predicted by factors like SES, parents' socialization strategies, achievement of family members, parents' home language use, home academic activities and guidance, the quality of ordinary family activities, home intellectual atmosphere, and the division of labor for home tasks (e.g., Taylor and Lopez, 2005).

At a more global level, the disparities are viewed to result, in part, from segregation of schools, limited personnel and physical resources, less qualified teachers, limited parental support, and the aforementioned mismatch between home and school environments (Allen & Boykin, 1992). Many of the problems that exist in the schools are not necessarily created at the level of the school. Rather, they stem from various "societal ills" such as poverty, classism, and institutional racism. As Graham (1997) describes it, in accordance with Rutter (1987) and Garnezy (1992), "schools where Black children tend to experience a cycle of failure seem to be structured for failure. A lack of direction, cultural insensitivity, poor management, negative teacher attitudes, tracking, family-school isolation, low academic expectations, and related signs of pessimism appear to create an ecology of failure for many Black and other culturally different children."

In regard to general neighborhood risk, it has been reported that in a sample of African-American junior-high school students, neighborhood risk prospectively predicted academic achievement (Gonzales, Cauce, Friedman, & Mason, 1996). Residing in neighborhoods with



more middle-class residents also has been related to higher educational values, greater effort in school (Ceballo, McLoyd, & Toyokawa, 2004), and greater likelihood of graduating from high school for African-American males, even when other factors were controlled (Ensminger, Lamkin, & Jacobson, 1996). Additionally, Plybon, Edwards, Butler, Belgrave, and Allison (2003) found neighborhood effects for African-American adolescent females' academic performance, as well, with neighborhood cohesion associated with a higher sense of school efficacy and higher grades.

As alluded to above, family and child factors also are influential. Taylor and Lopez (2005) found that family routine was positively related to school achievement, attendance, attention to school work, and sense of challenge, and negatively related to problem behavior in school in their sample of African-American adolescents. Although low expectations and perceived uncontrollability of circumstances are typically precursors to failure (e.g., Weiner, 1985), the associations between these maladaptive beliefs and educational attainment among African-American youth are far from certain, because of a lack of systematic, controlled studies in this domain (Graham, Taylor, & Hudley, 1998).

Because of its position as a mediator, academic performance has a role not only as an outcome but also as a risk for subsequent maladjustment. Repeated failure reportedly has a negative effect on children's academic self-esteem, because these failures lend themselves to feelings of learned helplessness and a sense of academic incompetence which, in turn, can lead to poor academic achievement (Au & Watkins, 1997; Licht & Kistner, 1986), although this has not been empirically demonstrated in inner-city populations. Additionally, Masten, Roisman, Long, Burt, Obradovic, Riley, et al. (2005) found support for a cascade model in which low

academic achievement not only increases previously existing externalizing behavior but also increases the risk for later internalizing problems.

One other less frequently explored but important construct is that of hopelessness, the expectation of highly undesirable outcomes and a perceived inability to influence these outcomes. It is important to note that while there is an abundance of literature examining hopelessness as a symptom or subtype of depression (e.g., Abramson et al., 1989; Alloy et al., 1988; Aneshensel & Huba, 1984), the current study will not view hopelessness from the same perspective. Because of the presence of hopelessness largely without the additional symptoms that tend to accompany it in the case of an internalizing disorder (Aneshensel & Huba, 1984; Spangler, 1993), hopelessness will be viewed not solely as a mediator between cognitions and depression or as a specific type of depression but as a construct with the potential to create a number of functional impairments later in life. Only a brief inclusion of the path between hopelessness and possible internalizing problems in this population will be presented here.

Although a number of quantitative studies of hopelessness among adolescents have been conducted, the vast majority has concentrated either on youth in psychiatric populations (Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983) or from a wide range of socioeconomic conditions. Existing research has largely failed, however, to take into account ethnographic documentations of hopelessness, which suggest that inner-city adolescents are particularly susceptible to hopelessness and its consequences (Anderson, 1998; Bolland, 2003; Holzman, 1996).

Becoming a productive adult member of society is one of the fundamental tasks following adolescence. Unfortunately, inner-city adolescents face a number of challenges that impede this from being a smooth transition, and some develop the attitude that this is an

unattainable goal. Qualitative studies have documented this sentiment, repeatedly showing the fatalistic statements and attitudes of indifference displayed by this group (Diver-Stamnes, 1995; Greene, 1999; Holzman, 1996; Kotlowitz, 1987). In relatively recent literature, this attitude has been deemed one of hopelessness, “an expectation that highly desired outcomes will not occur or that negative ones will occur..., and that nothing is going to change things for the better” (Joiner & Wagner, 1995, pg. 778). This construct most frequently has been assessed with Kazdin, Rodgers, & Colbus’ (1986) Hopelessness Scale for Children, which is a 17-item measure that focuses on the negative future expectancy and helpless expectancy associated with hopelessness. While the psychometric properties for this measure are adequate in normative and predominantly Euro-American samples, these properties have not been adequately determined for inner-city, minority youth.

It has been found that approximately 25% of inner-city females and 50% of inner-city males evidence moderate to high levels of hopelessness (Bolland, 2003). Overall the literature suggests that the rates of hopelessness in inner-city adolescents are considerably higher, on average, than the rates in non-inner-city adolescent samples. One normative adolescent sample had moderate to high levels of hopelessness in about 25% of the high school males and females (Page, 1991), almost comparable to the rates in an adolescent inpatient sample, which showed moderate to high levels of hopelessness in 63% of the sample (Kashani et al., 1997).

More recent literature is better able to explain the determinants of hopelessness. Many of the risks for later poor outcomes in inner-city youth also have been connected to the development of hopelessness in that population. Neighborhood factors appear to be especially influential. As children experience early exposure to the harsh living conditions of urban environments, they are left with feelings of hopelessness, anger, and distrust of the world around

them. More specifically, environmental stressors, such as poverty, drugs, and illegal activities in inner-city communities often create cynicism and antisocial attitudes in the youth who grow up in these communities (Brown & Gourdine, 1998). Bowman (1984) and Gibbs and Bankhead (2000) found that neighborhood factors, particularly joblessness, were related to hopelessness and decreased life satisfaction in their respective samples of African-American youth. Additionally, in several studies, exposure to violence has been correlated with hopelessness (Bolland et al., 2005; Ceballo, Ramirez, Hearn, & Maltese, 2003; DuRant et al., 1995) and purpose in life (DuRant et al., 1995). In their large, longitudinal sample of African-American adolescents from inner-cities near Mobile, Alabama, Bolland and colleagues (2005) found that in addition to a positive association with witnessing violence, the degree of reported hopelessness also was negatively associated with connectedness to neighborhood.

Family factors also appear to have some bearing on the presence of hopelessness. Family conflict, corporal punishment, SES (including educational level of the head of household), and anticipated SES as an adult correlated with hopelessness and purpose in life (DuRant et al., 1995). Additionally, disruptive factors, such as change in mother figure, traumatic stress, and worry, also have been associated with elevations of hopelessness over time (Bolland et al., 2005).

Other more individual level factors have been explored as well. There have been a number of studies that have found links between attributional style and expectations and hopelessness (e.g., Alloy et al., 1997; Feather, 1983), although not in the population of interest. Weiner (1985) also suggested that individuals' perceptions of the causes of success and failure affect a variety of emotions, including hopelessness and anger.

Of the sparse existing literature pertaining to the relations between hopelessness and subsequent maladjustment, it has been found that these feelings of hopelessness are associated with higher levels of risk taking behavior (e.g., sexual promiscuity, substance abuse, and violence), school problems, accidental injury (Bolland, 2003; DuRant et al., 1994; Jessor et al., 1998), and internalizing problems (Joiner, 2000). These empirical studies, however, have been limited by correlational and, often, cross-sectional designs. Moreover, they have not been grounded in any theoretical rationale and have not examined the possible underlying mechanisms leading to hopelessness, as well as those linking hopelessness and subsequent maladjustment and functional impairment.

Turning briefly to internalizing problems, researchers have suggested that child attributions (e.g., internal, stable, and global attributions of negative outcomes) lead to hopelessness which leads to depression; presumably no variables intervene between hopelessness and depression. The findings in youth have been equivocal, however, and they are virtually non-existent for inner-city minority youth. Garber and Hilsman (1992) found support for the cognitive stress model of depression. Joiner (2000) and Metalsky et al. (1993) also have found that hopelessness at least partially mediates negative attributions and depression. However, in a sample of 152 7<sup>th</sup> grade and 230 3<sup>rd</sup> grade children (23.6% African American), Abela (2001) found that hopelessness did not mediate attributional style and depressive symptoms following exposure to negative life events. He suggested that the type of hopelessness assessed (i.e., generalized vs. event-specific) could be influential in findings regarding the mediational role of hopelessness. It should be reiterated that none of these studies was carried out with inner-city children, so the generalizability of the findings to the group of interest is questionable. Although an increased level of hopelessness generally relates to an increased risk for internalizing

problems, the meaning this carries among African-American youth is not well known because the literature in this area is limited (Sanders, Merrell, & Cobb, 1999). West (as cited by Brouillette, 1999) noted that, until the early 1970's, African Americans had the lowest suicide rate in the US. Now their suicide rate is increasing faster than that of any other group.

Other children also may develop more generalized hopelessness, but rather than internalize their feelings, they begin to act out, seeing no reason not to engage in risky behaviors, because they believe their lives will be relatively short and unsuccessful despite their efforts. In a sense, inner-city youth may have less to gain from conformity because of the multitude of forces undermining their educational attainment. Comparing delinquent and more "bookwormish" youth in a northeastern housing project, MacLeod (1987; as cited by Burton et al., 1996) found few real differences in terms of later educational and occupational attainment. This lack of payoff was noticed by the more conventional youth, who, when interviewed, expressed regret about "wasting their time playing by the rules in school" (Hannon, 2003). Similarly, Lorion and Saltzman (1993) stated that children residing in impoverished and violent neighborhoods "may despairingly conclude that...they have neither the resources nor the likelihood of achieving lasting or socially approved outcomes. For them, socially unacceptable and risky...alternatives may become highly attractive."

The literature shows associations with externalizing behaviors, with studies documenting links between hopelessness and a wide range of outcomes, including aggressive acts, sexual promiscuity, and substance use; poorer academic achievement; higher rates of incarceration and recidivism; and lower long-term educational and occupational attainments (Jessor et al., 1998; Ogbu, 1993; Washington, 2003). In a sample of inner-city African-American adolescents, Bolland (2003) found that hopelessness was associated with every conceivable risky behavior,

including violence, substance use, sexual behavior, and accidental injury. Hopelessness also has been associated with increased use of violence and frequency of gang fighting in a similar sample (DuRant et al., 1994). Lastly, Kashani et al. (1989) found that in addition to relations with increased depression, increased hopelessness was associated with increased total psychopathology and school problems in their sample of predominantly Euro-American youth.

**1.3.3.3 Examination of direct links in the model** Having examined the primary pathways in the model, the question that remains is how all of these associations unfold over time. There are a number of ways this can then translate into poor outcomes. One possible pathway to developmental maladjustment stems from “deprivations of large magnitude that overwhelm adolescents and their families and result in hopelessness and a failure to see possibilities and alternatives” (Mechanic, 1993).

**1.3.3.4 Societal impact on neighborhood context** As Coll and Garrido (2000) argue, it is the “systematic exclusion from critical resources and power experienced by many minority populations [that] places these children and their families on less favorable developmental pathways from the very beginning.” That is, institutional racism and discrimination have facilitated economic, residential, and social segregation, where African Americans often are corralled into environments that are substantially less privileged than those usually inhabited by Whites (e.g., poorer quality healthcare, childcare, schools, occupational opportunities, and neighborhood conditions). A prime example of this comes from Mickelson and Heath (1999), who reported that many schools in North Carolina were still segregated at the building level, and that all core academic classes were tracked and racially identifiable, with African-American students disproportionately found in the lower tracks. The lack of financial investment and

adequate establishments in these communities, coupled with the emigration of Whites and major businesses out of the cities, has created communities characterized by male joblessness, female-headed households, non-marital births, family poverty, family unemployment, welfare use, high percentage of homes with government assistance, high exposure to violence, gang involvement, teenage pregnancy, and low school completion rates, all factors frequently associated with poor child outcomes (Sanchez-Jankowski, 1999; Seidman, 1998). The result is a subculture of impoverished minorities who are isolated from the rest of society and living in very insufficient conditions.

**1.3.3.5 Neighborhood influence on family and child variables** From early childhood through late adolescence, neighborhood conditions are associated with child achievement and social-emotional functioning (Leventhal & Brooks-Gunn, 2000). Neighborhoods influence children's development through a number of interrelated processes, including the availability of resources, social organization features, and environmental contagions (Furstenberg et al., 1999; Jencks & Mayer, 1990; Leventhal & Brooks-Gunn, 2000). Factors such as parenting behaviors, parent-child attachment, and peer relations also have been identified as potential mediators of the effects of urban poverty, community disadvantage, and economic hardship on children's behavioral outcomes (Simons et al., 1996; Sampson & Laub, 1994; Dodge, Pettit, & Bates, 1994; Skinner, Elder, & Conger, 1992). Breaking the neighborhood context down into its specific contributing characteristics, there are several means via which neighborhoods can exert influence.

Neighborhoods appear to affect activities and opportunities, in part, by means of collective socialization and parents' choices of socialization strategies (Brooks-Gunn et al., 1993). Particularly, levels of neighborhood cohesion and social order are indirectly associated with children's behavioral outcomes through their effects on the family and parenting behaviors,



such as the use of protective strategies (Dahinten et al., 2003; Dorsey & Forehand, 2003). For example, among African-American mothers who are poor, physical punishment as a child management technique is used more frequently among those who perceive their neighborhoods to be highly dangerous and filled with negative influences compared to those who describe their neighborhoods as safer (McLoyd, 1990).

Neighborhood factors also may inhibit effective parenting behavior through their effects on maternal psychological distress (Christie-Mizell, Steelman, & Stewart, 2003; Kotchick, Dorsey, & Heller, 2005). Paschall & Hubbard (1998) found that neighborhood poverty indirectly affected adolescents' propensity for violent behavior via effects on family stress and conflict and adolescent self-worth. Depressive symptoms also mediate the relation between neighborhood safety and inconsistent discipline, suggesting that the influence of safety on inconsistent discipline is due, in part, to its impact on maternal depression (Hill & Herman-Stahl, 2002). "Thus, a parent who is confronted with a multitude of stressors on the neighborhood level may experience higher levels of stress which may ultimately influence parenting practices." This notion is supported by neighborhood research which consistently has shown that neighborhood factors (i.e., poverty, residential instability, community participation) may influence either global child maltreatment rates or parenting practices (Plybon & Kliwer, 2001).

A number of qualitative studies confirm the link between restrictive parenting and disadvantaged neighborhoods, suggesting that parental strategies are often influenced by perceptions about neighborhood risk (Rankin & Quane, 2002). A threatening and violent neighborhood may contribute to high levels of parental emotional distress that likely limits a parent's capacity to be involved with their children and to monitor their children's behavior, and may increase their use of punitive and restrictive discipline, especially due to the environmental

threats. Parents may struggle to protect their children and to help them deal with violence-related stress. Moreover, parents living in dangerous neighborhoods may have difficulty marshaling the energy necessary to be warm, consistent, and nurturing – practices that have been linked to positive developmental outcomes in young children. Parents who perceive their neighborhood as dangerous may be particularly intolerant of disobedience, because such an environment threatens their child's safety, resulting in punitive and restrictive parenting (Colder et al., 2000). Some of the most frequently employed parenting strategies minimizing the effects of community violence include structured home environments, high levels of parental monitoring and supervision, limited neighborhood contact, the teaching of practical household safety skills, and prayer and positive thinking (Dahinten et al., 2003; McLoyd, 1990; Randolph et al., 1996).

Aside from influencing parenting processes, violence can also contribute to child cognitions and competencies that affect later outcomes. Some researchers suggest that the violence in these communities obstructs young children's abilities to acquire skills necessary to be successful in school by undermining young children's development of security, autonomy, competence, and self-esteem, and by triggering dysfunctional coping responses. The inability of caregivers to protect children may lead to a sense of mistrust for authorities and result in the development of aggressive, self-protective behaviors that work counter to values such as empathy and sensitivity (Letiecq & Koblinsky, 2004). Moreover, children's preoccupation with violent events, based on recorded conversations with 8-13 year old boys and girls, may distract them from learning and limit their ability to effectively attend to and participate in school activities and consequently limit school success (Towns, 1996). Colder and colleagues (2000) also found that perceived neighborhood danger was associated with children's beliefs about

aggression, which was in turn associated with children's use of aggression; this process is likely to result from hypervigilance to hostile cues and automatic attribution of threat of others.

#### **1.3.3.6 Effects of Family Context on Child Characteristics and Academic Performance**

Moving along the model toward the next contextual risk factor, we observe the influences of family contextual factors. As with societal and neighborhood contexts, family environments also contribute to developmental outcomes in a number of ways. Belsky (1984) proposed a model focused on the determinants of parenting, in which he presumes that parenting is directly, but unequally, influenced by forces originating from within the individual parent, within the individual child, and from the broader social context in which the parent-child relationship is embedded. Families are the primary unit for providing the tools necessary for children to grow, but there are numerous problems often faced by inner-city families that inhibit their ability to parent as effectively as non-inner-city parents and diminish their ability to promote cognitive and social growth.

Because they are more emotionally distressed than their advantaged counterparts, it is not surprising that "disadvantaged parents" may be unable or unwilling to provide supportive, sensitive, and involved parenting (Grizenko et al., 1992; McLoyd, 1990). The family stress model postulates that low income influences children's development through its impact on parental mental health, which then influences parenting practices, which, in turn, are associated with children and youth outcomes (Linver et al., 2002). The assumption is that "stressful life conditions endemic to lower status adversely affect the parent's psychological orientation or emotional state, which in turn influence parent-child interactions" (McLoyd, 1990). Psychological strain encourages parents to adopt disciplinary strategies that require less effort (McLoyd, 1990; Santrock, 1998).

A vast literature exists concerning the consequences of nonsupportive behavior in parents on children's socioemotional functioning. Research consistently shows that children experiencing maternal unresponsiveness; ineffective, inconsistent, or negative parental control strategies; intrusive caregiving; lack of positive involvement and rejection; and modeling of angry conflict resolution strategies have more psychological disorders and exhibit more antisocial aggression than do children experiencing more positive parenting (Campbell et al., 2000; McLoyd, 1990; Shaw & Vondra, 1995). However, this parenting style primarily has been associated with negative outcomes in middle-class European-American families. Baumrind (1972) suggested that a more forceful, less permissive may have an adaptive significance for African-American families. African-American children's greater likelihood of encountering dangerous situations may be grounds for an authoritarian or "no nonsense" parenting style (Campbell et al., 2000; Dearing, 2004; McGroder, 2000).

Family contextual variables also display direct links with child characteristics, via their effects on child cognitions and competencies. One mechanism by which children learn to think negatively about themselves, their future, and the causes of events may be observing and imitating significant others. It is especially likely that children learn about themselves and the world from hearing what their parents' say about their (the child's) behavior. Another way children might develop negative cognitions is through dysfunctional parenting. Bowlby (1980) proposed that early childhood experiences with important attachment figures influence the working models and the cognitive biases individuals bring to new situations. Significant correlations have been found between parenting characterized by high levels of criticism, rejection, intrusiveness, and lack of warmth and children's low self-esteem, high self-criticism, and dysfunctional attitudes.

**1.3.3.7 Association of child characteristics and academic performance** So, families seem to be influential in a number of ways, both early as well as over the course of development. One of the most important roles they appear to play, however, is that of preparation for life beyond the home and integration into a larger society, namely school. Thus, the portions of the model pertaining to child characteristics and competencies, as well as academic experiences, will be considered now. Typically, African-American children arrive at school with positive feelings about the possibilities of the schooling situation, but by second grade their impressions have shifted to negative images of the teacher and the school environment, and by the time they reach the fifth grade, the general feeling expressed is that of cynicism (Brouillette, 1999). A large number of African-American children exhibit poor performance in school not because they are incompetent, but because they feel hopeless, develop low expectations, minimize the significance of effort, or succumb to impending failure. This failure “increases anomie and undermines the individual’s ability to identify with the values of the larger society” (Graham, 1997). According to Ogbu, many African-American youth may learn that education is not a vehicle to social mobility and opportunity, and thus develop negative attitudes toward schooling. For many, dropping out of school is “just one step in benumbing descent into an abyss of hopelessness,” as many students describe alternating between feelings of lethargy and desperation (Brouillette, 1999). The result is widespread school failure within the African-American community. By the middle-school years, according to Holliday (as cited by Slaughter & Epps, 1987), the cumulative impact of these rejections is to “transform young Black children’s achievement efforts into learned helplessness.”

To reiterate, there are a number of factors that contribute to and sustain the gap in achievement between inner-city minority youth and White youth, including neighborhood

composition (Ensminger et al., 1996) and quality (Plybon et al., 2003; Williams et al., 2002), quality of early home environment (Blair, 2001), school characteristics (Davis & Jordan, 1994), parental expectation (Ceballo et al., 2004), and parenting practices (Slaughter & Epps, 1987). This gap in turn, has been linked to later maladjustment in this population, in addition to the aforementioned feelings of hopelessness and despair. In addition to placing severe limits on economic and occupational attainment, academic failure is of concern as it has been tied to a host of problematic consequences including delinquency (Sampson & Laub, 1993), psychopathology (Kurdek, 1987), and substance abuse (Engel, Nordlohne, Hurrelman, & Holler, 1987).

**1.3.3.8 Buffers** The fact that only 25-50% of inner-city youth endorse significant levels of hopelessness suggests that there is another substantial percentage that does not succumb to the effects of hopelessness at all. What is it that sets these children apart? “Resilience is concerned with individual variations in response to risk” (Rutter, 1987, p. 317). It is a dynamic process that varies between individuals and over time within individuals (Jarrett, 1997). In the current study, resilience is being viewed as the ability to evidence positive outcomes in the face of environmental challenges in the neighborhood (violence exposure) and family (poor parental practices) contexts. This is based on the assumption that these factors will play a negative role in the current sample, as they have been shown consistently in the literature to adversely affect the development of inner city youth living in poverty (e.g., Bolland et al., 2005). Additionally, the frequency of positive outcomes reported among inner city youth stimulates the exploration of factors that may influence and explain positive development in these environments. Hence, several of the factors that prior research indicates may be protective in this population will be explored, including extracurricular involvement, religiosity, and affiliation with prosocial peers (Garcia-Coll & Garrido, 2000).

Because of the relatively weak and inconsistent links between self-esteem and school achievement among African Americans, social psychologists have suggested that African-American students often seek outlets other than achievement success to feel good about themselves or to avoid feeling bad (Graham, Taylor, & Hudley, 1998). As stated by Castenell (as cited by Stevenson, Reed, Bodison, & Bishop, 1999) in a study of area-specific achievement motivation, if an adolescent is “discouraged by significant others, or through repeated failure, to perceive achievement [as possible] within the school environment, then that adolescent may choose to achieve in another arena,” including “mastering” such abilities as street-wisdom,

playground sports, sexuality, or domestic or childrearing chores, in an effort to demonstrate competence. Stevenson and colleagues followed this sentiment by stating that “When youth are engaged in the melodic singing, rapping, and poetic pontificating about their existence, this is considered to be a natural, creative, and proactive process in managing the potential for hope within a neighborhood and a world of “hopelostness” (Stevenson et al., 1999).

This suggests an influential role of extracurricular involvement to facilitate the attainment of these goals. While theoretically this concept has caught on, empirically the literature has lagged behind. Jordan (1999) found that sports participation was linked to improved school engagement and academic self-confidence; but because this study was cross-sectional in design, there is the issue of bi-directionality of effects. Likewise, Posner and Vandell (1999) found that increased after school activities were associated with longitudinal adjustment.

Because of peers’ significance during childhood and adolescence and the finding that inner-city youths are more likely to conform to the view of their peers than that of a parent (Taylor, 1991), it is worth mentioning their role in the educational attainment of minority youth. While developmental theory suggests that strong peer networks promote healthy psychological development, motivation, and competence, African-American peer groups are typically viewed as detrimental to academic achievement strivings. Steinberg et al. (1992), for example, argued that African-American youths are more likely to associate with peers who do not value or encourage achievement, and that the dominant influence of the peer group is powerful enough to offset the positive influence of parental values and effective childrearing strategies. Though this is a widely held assumption, it has only rarely been tested, and the limited evidence is contradictory (Cauce, Felner, & Primavera, 1982; Cauce, 1986; Seidman, Allen, Aber, Mitchell, & Feinman, 1994). Such inconsistencies are difficult to reconcile, particularly since these studies



are few in number. One possibility is that neighborhood influences undermine the positive impact of peer support for adolescents, perhaps by preventing the formation of supportive peer groups and prosocial peer activities or by directly shaping the values and activities of the peer group to be less encouraging of academic achievement (Quane & Rankin, 1998; Sampson & Groves, 1989). Epidemiological models have focused on the negative ways that peers influence each other's behavior and assert that the likelihood of engaging in antisocial behavior increases with greater exposure to those already engaging in such behavior. Thus, it is important to ascertain whether positive peer groups form in these environments, and, furthermore, whether the presence of positive peer role models can have a protective effect on African-American youth.

The last moderator of interest is that of religion. Unlike some of the other moderators, there have been numerous consistent findings regarding its role as a significant protective factor. The church is particularly important in the African-American community because "religion is the organizing principle of the Black experience in America" (Cook, 2000). In support of resiliency theory, adolescents who attended religious services more often were more likely to have higher purpose in life scores, which, in turn, were associated with less violent behavior (DuRant et al., 1994). Religiosity also has been shown to have an inverse direct effect on both substance use and sexual behavior (Wills, Gibbons, Gerrard, Murry, & Brody, 2003), as well as the commission of serious crimes (Johnson et al., 2000). Additionally, increased church attendance has been associated with decreased adjustment problems (Christian & Barbarin, 2001) and increased psychological functioning (Ball et al., 2003) in African-American youth.

## **1.4 METHODOLOGICAL IMPROVEMENTS ON EXISTING LITERATURE**

As previously illustrated, there are a number of studies examining the associations between risks and outcomes in inner-city youth. However, many of these studies are cross-sectional in nature, not theoretically informed, fail to address developmental considerations, and are not comprehensive in scope.

While academic failure has been more fully explored in this population, the availability of information pertaining to the role of hopelessness has lagged behind. There is a substantial body of literature examining the construct of hopelessness and its relation to subsequent maladjustment. The numerous problems within the extant literature, however, leave much to be desired in the realm of hopelessness research, particularly in the context of inner-city environments. One of the initial concerns to be addressed is the limited samples on which the previous research has been conducted (Page, 1991). Much of the available research has been conducted with psychiatric populations and with individuals from varied socioeconomic backgrounds, and it has tended to focus on the prevalence and specificity of hopelessness as a symptom of a mood disorder, particularly depression (Kashani et al., 1997; Page, 1991). Due to the concern regarding the potential high lethality associated with hopelessness in some populations, there also has been a large literature addressing the issue of hopelessness and suicidality (e.g., Reinecke et al., 2001; Yorbik et al., 2004). Thus, empirical data and normative distributions of hopelessness are largely lacking. Additionally, the generalizability of the existing research to populations other than those with diagnosed mental health concerns is questionable.

While the previous studies have offered valuable information regarding hopelessness as a potential mediator between attributions and depression (e.g., Alloy et al., 1988), there remains a paucity of literature describing potential contributors to the development of hopelessness

(Bolland, Lian, & Formichella, 2005). There also are only limited data regarding the association between hopelessness and outcomes other than internalizing problems. Only studies by Bolland et al. (2003) and by DuRant et al. (1994) consider hopelessness among adolescents living in inner-city neighborhoods, and these studies are limited to consideration of violent consequences of hopelessness.

Of the limited empirical and ethnological studies examining hopelessness in the population of interest, a number of separate issues are raised. One primary concern is the utilization of only correlational or qualitative methods, generally with small, cross-sectional samples (Bolland, 2003; Kashani et al., 1987); there are no well-designed, developmentally informed, longitudinal studies of hopelessness in inner-city youth nor any experimental studies from which we can infer causation of early contextual factors and later maladjustment. Another limitation of the previously conducted studies is that there is, at best, minimal consideration given to the underlying mechanisms that can contribute to hopelessness and its relation to later impairment. Last, but certainly not least, there is only sparse research examining the role of protective factors in mitigating some of the effects of early harsh environments on the development of hopelessness and poor child outcomes.

The current study attempts to address some of these issues by using multicohort longitudinal data to examine the associations between several domains of contextual risks and outcomes in inner-city youth. Additionally, this study will utilize an integrative model of inner-city youth development to explore potential pathways via which these associations occur over time, exploring both mediators and moderators of these associations. This study will include developmental considerations, such as the age of the child and changing levels of hopelessness and internalizing and externalizing behaviors over the course of development.

## **1.5 SUMMARY AND QUESTIONS**

The present study attempts to examine a relatively untapped area of research, utilizing a developmentally informed, process-oriented exploration of the roles of academic failure and hopelessness as mediators between contextual variables and subsequent maladjustment. Summarizing the previously presented literature review, it appears that inner-city, minority youth face an early disadvantage as they contend with a host of contextual risks, and, in some cases, minimal protective factors. This leaves children with beliefs and competencies contrary to those of most of mainstream America. Almost immediately these children suffer the consequences of this mismatch, as they flounder in an educational system that is ill-prepared to meet their needs. With exposure to repeated early academic failures, inner-city youth soon feel as if their efforts are futile and abandon hopes of attaining their goals via mainstream means. Those who see no prospect of a positive future or doubt they will survive long enough to have a future at all, will abandon hope altogether and either act out or internalize. This vicious cycle continues over generations, lessening children's hopes of escaping their environments with each generation.

While this has proven to be an accurate assessment of the situation based on ethnographic data, there is little to no empirical support from larger samples to validate these claims. Although there have been cross-sectional, and limited longitudinal, studies directly linking some of the concepts contained in the current conceptual model, there has been no simultaneous examination of all of the proposed concepts in inner-city, minority youth. Thus, the current study seeks to remedy this by testing a hypothesized mediational model of development in a population of urban African-American youth. The questions and hypotheses for the current study are as follows:

1. How well does the hypothesized partial mediational model fit with the data, examining academic failure and hopelessness (both Time 2 and change in hopelessness) as mediators between contextual risks (i.e., neighborhood violence, parental efficacy, child cognitions (i.e., antisocial attitudes) and outcomes (i.e., internalizing, externalizing problems)? More specifically, comparing three plausible models, is the best fitting model for the current data a model including academic failure and hopelessness as mediators, a model including academic failure but not hopelessness as a mediator, or a model excluding hopelessness and academic failure (with direct effects from risks to outcomes)? Although there is no theory, model, or study that has incorporated contextual risks, academic failure, hopelessness, and outcomes, based on extant studies examining some of these constructs independently, it is hypothesized that the data will fit the proposed mediational model better than the competing models. More specifically, it is predicted that higher levels of early contextual risks (at one time point) will be related to increases in later academic failure, which will be related to increases in hopelessness, which, in turn, will predict subsequent maladjustment.
2. How do gender, extracurricular involvement, religiosity, and affiliation with prosocial peers moderate the associations in the sample? While literature is limited in some of these areas, it is predicted that the associations will be stronger and the model a better fit for males, given literature suggesting that more males in this population tend to experience higher levels of hopelessness and externalizing problems. Additionally, those youth higher on protective factors will show lower associations between risks and hopelessness, and hopelessness and outcomes.

3. While the model presented applies to general inner-city, minority development, is there a subgroup within this larger population who are significantly more susceptible to hopelessness, risks, and negative outcomes? That is, comparing those with high versus lower levels of hopelessness, are there significant differences in their mean levels of contextual risks, outcomes, and buffers, as well as differences in correlations between risks and outcomes? It is predicted that children in the high hopelessness group will have higher mean scores on contextual risks and lower scores on protective factors than those in the low hopelessness group and higher correlations between risks and outcomes.

## **2.0 METHODS**

### **2.1 PARTICIPANTS**

Participants for the current study are part of the Mobile Youth Survey, an ongoing multicohort, longitudinal study of African-American youth residing in high-poverty, urban neighborhoods in the Mobile metropolitan statistical area (MSA). Data were collected annually during the summer months between the years of 1998 and 2005, resulting in 7 waves of data; the study is currently ongoing. African-American or Creole individuals having data at wave 1 (Time 1), wave 3 or 4 (Time 2), and wave 6 or 7 (Time 3) were included in the study; similarities in cohort scores at waves 3 and 4 and waves 6 and 7 allowed for the inclusion of individuals with data at either of these time points, maximizing the sample for the 3 time points in the current study. The final sample for this study consisted of 340 African-American youth, ages 9-12 at Time 1.

### **2.2 PROCEDURES**

In 1998, Bolland (2001) selected 13 of the most impoverished neighborhoods in the Mobile, Alabama MSA based on data from the 1990 decennial census. According to the 2000 decennial census, 46.1% of Mobile's population was African American and 22.4% lived in poverty. Median household income was \$31, 445. Prichard, a bordering city of approximately 30,000, is

largely African American (83.3% of residents), and many of its residents live in poverty (44.1%). Median household income for Prichard was \$19, 544. In 1990, 42% of African Americans in the MSA lived in high poverty census tracts, placing Mobile third in the nation in this measure of concentrated poverty (Jargowsky, 1997, as cited by Bolland et al., 2005).

Mobile and Pritchard Housing Authority provided Bolland with a list of addresses where youths between the ages of 10 and 18 were listed on the lease. He allowed youths who turned 10 by August 30 or who turned 19 after June 1 to participate. During the summer of 1998, Bolland randomly selected approximately half of these apartments in the public housing neighborhoods and attempted to reach the leaseholder, usually via door-to-door contact. In the non-public housing neighborhoods, he randomly selected approximately half of the houses and apartments for contact. Once contact was made, via door-to-door efforts, he and his colleagues obtained parental consent, explained confidentiality to the youth, and scheduled a time and place for the youth to complete the questionnaire. The youths had to attend a group administration of the survey in a nearby church, community center, or other facility in their neighborhood. The groups were generally around 15-30 adolescents, with a range from 3-40. The questions were read aloud and the youths were asked to mark the appropriate answers in their survey booklets. In 1998, he surveyed 1775 youths. The 1998 response rate was between 60 and 70% of all youths in the targeted households. The exact sampling frame was unknown so he was forced to estimate the number of eligible participants living in each targeted residence where he was not able to make contact with any person. In 1999, he attempted to resurvey each of the wave 1 participants, and he surveyed an additional sample of first-time participants (1221, representing the new 1999 cohort). During each subsequent year between 2000 and 2004, he engaged in a similar procedure: Each year, he attempted to interview youths from previous cohorts, and he added a



new cohort. By 2003 he surveyed a total of 5895 different youths, 55.9% of them more than one time; the mean number of times that each youth in the study was a survey participant was 2.28. The 1999 response rate was between 69% and 88%. As an increasingly large number of respondents moved out of the targeted neighborhoods, response rates decreased each year until by 2003 they stood between 59% and 82%. Each participating youth received \$10 per year for the hour that was required to complete the survey. [Table C1](#) shows the number of youths in each cohort, as well as his success in conducting follow-up surveys with them. Most of the attrition was due to residential relocation.

[Table C2](#) shows that the six cohorts are generally similar on demographic factors. The declining percentage of public housing residents was caused by three factors, one methodological and the other two demographic. In 2001, he added a non-public housing neighborhood to the survey, and over 100 youths in the 2001 survey lived in this neighborhood. In addition, the Mobile Housing Board demolished a large number of public housing units in 1999, and the Prichard Housing Authority began relocating public housing residents in 2003 in preparation for the HOPE IV project. On most other factors, the six cohorts were remarkably similar.

Because it is not developmentally sound to collectively consider changes across time in a sample of youth ranging from 9-26 years of age, the youth were classified into three age groups on the basis of their age at initial contact: (pre-early adolescence) 9-12, (mid-adolescence) 13-15, and (late adolescence) 16-19 years old. Although somewhat arbitrary, these age classifications were chosen based on the developmental tasks and transitions within and across age groups. [Table C3](#) shows the number of children within each age group, broken down by the number of waves for which they participated in the MYS study. Since three time points (T1 for contextual

factors, T2 for hopelessness, and T3 for outcomes) were utilized in the study, only individuals containing an assessment at wave 1, wave 3 or 4, and wave 6 or 7 were included in the sample, significantly reducing the sample size. Due to the significant reduction in sample size, analyses could only be completed for the youngest age group. The original sample size for this age group was 354. Fourteen of these participants were subsequently removed due to a substantial amount of missing data, (more than 15% of the data), resulting in a final sample of 340. The mean age for the sample at time 1 was 10.92 (SD=0.957), 13.31 (SD=1.087) at time 2, and 16.21 (SD=1.173) years at time 3. Approximately 49 percent were males ( $n=167$ ), and 51 percent were females ( $n=173$ ). All participants included in the current study identified themselves as African American or Creole.

Analyses were completed using SPSS and Mplus (Muthen and Muthen, 1998), a statistical software package that permits the modeling of data using SEM. A more thorough description of the types of analyses completed, along with the results of those analyses, is presented below.

## **2.3 MEASURES**

The survey consisted of 294 yes-no and multiple choice questions concerning the respondent's risk behaviors (e.g., violent and aggressive behaviors, alcohol and drug use, and sexual behavior), circumstances (e.g., family structure and function, peer pressure, and support), and attitudes (e.g., violence, sexuality, and drug and alcohol use); it also addressed a number of psychosocial variables and feelings (e.g., self-worth, hopelessness, future orientation, sources of worry, and support from neighborhood). Most questions were adapted from existing scales (e.g.,

Youth Risk Behavior Survey, National Longitudinal Study of Adolescent Health) and modified to reflect the unique characteristics of this sample (e.g., a wide range of ages and heavy use of street vernacular).

While many of the constructs of interest in the current study have been explored in previous studies, not all of the variables assessed via the questionnaire have been looked at in the existing literature. Thus, psychometrics for the variables of interest in the current study were calculated, and summaries of these psychometrics are presented in [Tables B1-B3](#). Additionally, consistency of the measures over time is presented in [Table C4](#).

### **2.3.1 Community context (Neighborhood Safety)**

A total of 8 items assessed respondents' feelings about their neighborhood, focusing primarily on neighborhood safety and violence exposure. The questions asked the respondents whether they agreed or disagreed with statements about their neighborhood safety (e.g., "Have you ever seen someone cut, stabbed, or shot?"). Scores ranged from 0 to 8, with higher numbers indicating greater perceived neighborhood safety. The internal reliability of the scale ranged from .70 to .81 across time.

### **2.3.2 Family context**

**2.3.2.1 Sociodemographics** Per capita income from census tract data was obtained for a previous study (Bolland, 2003). The community epidemiology model guiding the MYS allowed for the control of SES by sampling rather than statistical techniques by limiting the study to respondents from very low-income, inner-city neighborhoods. Bolland (personal communication,

2006) reported that none of the families achieved an SES level higher than lower-middle class. Additionally, the vast majority of the families lived in a neighborhood where the median household income was less than \$12,000 at one or more time points.

**2.3.2.2 Parental efficacy** This scale is a 21-item composite measure of parental warmth and limit setting. Warmth is comprised of 12 items measuring maternal and paternal warmth items and is based on previous work by Lamborn et al. (1991; as cited by Vazsonyi et al., 2006). Six items were repeated for both “the person who is most like a mother to you” and “most like a father to you.” These items addressed the closeness of the parent-child relationships (e.g., “We do fun things together”). Participants were asked to respond either 1 (I don’t have anyone who is like a mother/father to me), 2 (agree), or 3 (disagree). Items were reverse coded, so that a high score represented a high level of closeness/warmth. The scores were re-coded as 0 (disagree) or 1 (agree). Nine items assessed parental limit-setting. A sample item was “Are you allowed to stay out after dark on school nights?” These items were responded to on a yes/no scale, with higher scores indicating higher levels of parental limit-setting. Scores on this scale ranged from 0-21, with higher scores indicating higher levels of parental efficacy. Reliabilities for this scale ranged from .75 to .79 across time.

### **2.3.3 Child characteristics**

**2.3.3.1 Gender, age, and race** Gender, age, and race were measured on an annual basis via self-report. Participants were asked to indicate whether they were male (1) or female (2). They were also asked to indicate their age in years, as well as their date of birth and current grade level.

Race was determined based on respondents' self identification on a yes/no scale, asking if the respondent was African American, Caucasian, Hispanic or Latino, and mixed-race or Creole.

**2.3.3.2 Antisocial attitudes** Seventeen items assessed the respondent's values and attitudes toward school, violence, sex, and substance use. Sample items include, "If you don't carry a knife or gun in my neighborhood, something bad might happen to you"; "Drinking alcohol is not harmful as long as you don't get drunk"; and "If a boy my age has sexual intercourse, he proves that he is a man." All items were scored as "agree" (0) or "disagree"(1), with higher scores indicating more antisocial attitudes and beliefs. Reliabilities ranged from .64 to .74 across the years.

#### **2.3.4 Academic Performance**

School data were obtained, when possible, for the respondents. These data consisted of scores on the Stanford Achievement Test (SAT). The Stanford Achievement Test, 9th Edition (Stanford 9) is a widely used achievement test that was designed to measure achievement in the curriculum content commonly taught in grades 1 through 9 throughout the United States. This test has been standardized on a nationally representative sample. The reading composite and math composite scores, as measured by percentile rank, were used to create an "academic performance composite." SAT's were administered each year, and they are the only scores that constitute the measure of academic performance; grades were not obtained for this sample.

### **2.3.5 Hopelessness (Brief Hopelessness Scale)**

Hopelessness was measured using five questions adapted from the Hopelessness Scale for Children (Kazdin et al., 1986), selected for their high item-total correlations. Each was asked in the form of a statement, about which the respondent disagreed (0) or agreed (1). The items included were 1) “All I see ahead of me are bad things, not good things,” 2) “There’s no use in really trying to get something I want because I probably won’t get it,” 3) “I might as well give up because I can’t make things better for myself,” 4) “I don’t have good luck now and there’s no reason to think I will when I get older,” and 5) “I never get what I want, so it’s dumb to want anything.” They added a sixth statement (“I do not expect to live a very long life”), based on low expectations of survival among many inner-city adolescents, to create an additive 6 point Brief Hopelessness Scale, with higher scores indicating higher levels of hopelessness. Based on previous literature (e.g., Bolland, 2003), a cutoff of 4 or greater was used to distinguish individuals with high versus low levels of hopelessness, which in the present sample represented approximately 20% and 80% of participants, respectively. The internal reliability ranged from .73 to .83 across time points.

### **2.3.6 Internalizing**

**2.3.6.1 Suicidality** Three items assessed whether a respondent had seriously considered killing him/herself over the past year, whether he/she had ever attempted suicide, and whether any of his/her friends had ever attempted suicide. All responses are given on a yes (1)/no(0) scale, with higher scores indicating higher levels of suicidality. Due to significant numbers of missing

suicidality items at T1, no psychometrics were obtained for that time point. Reliabilities for this scale at T2 and T3 were .58 and .55, respectively.

**2.3.6.2 Worry** Nine items assessed how much respondents worried about various stressors, such as family financial difficulties, getting good grades, getting a good job in the future, and getting along with people of other races. All items were rated as “not at all,” “some,” or “very much,” creating a scale ranging from 0 to 18, with higher scores indicating higher levels of worrying. The internal reliability of the scale ranged from .70 to .81 across waves in this sample.

**2.3.6.3 Traumatic stress** Nine items assessed how respondents feel when bad things happen to friends or relatives (e.g., “I have bad dreams about the bad things that have happened to a family member or friend”). These items are scored on a 3-point scale ranging from “almost never(0)” to “sometimes (1)” to “very often (2),” creating an additive 18-point scale, with higher scores indicating higher levels of traumatic stress. The internal reliabilities for this scale in this sample were between .70 and .78 across waves of data.

## **2.3.7 Externalizing**

**2.3.7.1 Aggression** There were 28 items assessing the respondent’s endorsement of committing violent behaviors, including instances of fighting and encounters with weapons within one’s lifetime (e.g., “Have you ever pulled a knife or gun on someone?”), and more recently. The respondent could answer “yes” or “no,” creating an additive scale, with higher scores indicating more violent behaviors (perpetrated). The reliabilities for this scale ranged from .88 to .90 across time points.

**2.3.7.2 Substance use** Seventeen items assessed the respondent's use of cigarettes, alcohol, and other substances, both recently and over one's lifetime. Items assessing whether the respondent had ever used any of the said substances were scored on a yes(1)/no(0) scale. For those questions specifying a time frame (e.g., "within the past month"), the responses were either "no," "yes, just once" or "yes, more than once," which were recoded into either "yes" or "no." Higher scores indicate higher levels of reported substance use. Reliabilities for this scale ranged from .90 to .94.

**2.3.7.3 Sexual activity** Ten items assessed the respondent's sexual experiences. Items assessing whether the respondent had ever had intercourse and used contraception during intercourse were scored as "yes" or "no." For those questions specifying a time frame (e.g., "in the past month"), responses were either "no," "yes, just once," or "yes, more than once," which were recoded into yes/no responses. Higher scores indicate higher levels of sexual risk. Reliabilities for this scale ranged from .80 to .81 across time.

## **2.3.8 Moderators**

**2.3.8.1 Religiosity** Three items assessed religiosity, focusing on participation in religious activities and how often one reads or studies a Holy Book, each of which are measured on a 5-point scale ranging from "never" to "once a week or more"; these items were recoded into a scale containing 3 gradations. The importance of religion to the respondent is also assessed on a 3-point scale ranging from "not important" to "very important." Reliabilities for this measure were lower than established minimally adequate reliability standards, ranging from .39 to .62.



Religiosity previously has been measured by a single item assessing the importance of religion, with higher scores indicating greater religiosity.

**2.3.8.2 Extracurricular involvement** Four items assessed how respondents spend their time outside of school during the school year. Respondents were asked to indicate the amount of time they spent engaging in such activities as organized after-school activities, employment, and social time with friends. Scales were typically rated from 1 to 5 hours, 6 to 10 hours, 11 to 20 hours, or more than 20 hours per week, with the exception of after-school participation, which had only 3 gradations, which was recoded to fit the remaining scale-items. An alpha coefficient was not calculated for these items, because involvement in one activity (e.g., working a job) may preclude participation in other activities (e.g., afterschool clubs or sports).

**2.3.8.3 Affiliation with prosocial peers** Eleven items assessed how respondents felt about their peers and their peers' attitudes and beliefs. The questions asked "how many" of the respondent's friends had certain thoughts (e.g., "You are cool if you don't use drugs"); responses were either "most of them (2)," "some of them (1)," or "almost none of them (0)." Higher scores indicate more positive peer affiliations. Reliabilities for this scale ranged from .61 to .73.

### **3.0 RESULTS**

#### **3.1 MISSING DATA ANALYSES**

Only individuals containing an assessment at wave 1 (T1), wave 3 or 4 (T2), and wave 6 or 7 (T3) were included in the sample. T2 scores for each item were created such that if an individual had data on either wave 3 or 4, the score from that wave constituted the score for T2. If the individual had data for both waves 3 and 4, and the scores were not the same for the two waves, the scores were averaged for scaled items, or, for dichotomous items, the item was scored in the direction of being true if it was marked true/yes at either wave 3 or 4. After creating the T2 items based on the available values from waves 3 and 4, T2 items for which neither wave provided a score, data were imputed using expectation maximization (EM). The EM method estimates missing values by an iterative process. This is now the most common method of imputation (Garson, 2006). Missing values were estimated for all items except school data because of the larger amount of missing data. Due to the relatively large number of items used for all of the measures, composites were constructed for each measure, as opposed to using the individual items in the SEM model. After estimation of the missing item values, composite measures for each of the variables included in the main analyses were created by summing the items included in that measure. This same procedure was used to create the T3 variables.

Because some missing values were estimated, it is important to note that prior to estimating these values, a missing value analysis for the sample was completed using SPSS to ensure there was not a substantial amount of data being estimated. The results indicated that the extent of missing data was small and could be ignored; 96.1% of individuals had more than 90% of the data, and all of the items had more than 90% of the data available, with the exception of school data, which had approximately 72%, 86%, and 23% of the data present at T1, T2, and T3, respectively.

Psychometrics for the variables of interest in the current study are presented in [Tables B1-B3](#). Previously conducted attrition analyses suggested that data are missing at random; that is, there is unbiased attrition and low within-wave rates of missing data based on the larger overall sample (Bolland et al., n.d.). Given the differences in developmental tasks and behaviors, as well as differences in contexts and likely in risks, comparing the current sample of 9-12 year olds against the larger nonsample consisting of individuals ranging from 9-19 years of age at T1 was not developmentally sound. Thus, comparisons were kept to the age group of interest within the same cohort, because these were all individuals with the opportunity to participate in each wave included in the current study. When looking specifically at participants 9-12 years of age, there were 697 total youth with T1 assessments, only a fraction of whom also had assessments at T2 and T3. Those with assessments at the appropriate waves (1, 3 or 4, and 6 or 7), and consequently at all 3 time points (T1, T2, and T3), constitute the sample (N=340), and those with data at T1 and only one or no other time point constitute the non-sample (N=357). Analyses were completed to compare T1 scores from the current sample with the T1 scores for the 9-12 year old non-sample. The same was done for T2 scores, when available for the non-sample, as well as for T3 scores. The means and SD's are presented in [Tables B1-B3](#). Bivariate correlations between

the variables in the model for the sample and non-sample were calculated and are presented in [Tables C5-C7](#). The analyses indicated few meaningful differences between the current sample and those individuals not included in the sample on variables such as “parental efficacy” and “substance use” at all three time points, and “academic performance” at the later two time points. Additionally, correlations generally appeared to be stronger for those individuals not included in the sample. Of 45 to 55 correlations across time points, only 4 to 10 of them were significantly different across groups, and these differences were generally of small magnitude, except during late adolescence when the sample size had considerably diminished.

### **3.2 DESCRIPTION OF ANALYSES**

The major questions for the current study were addressed using Structural Equation Modeling (SEM). SEM is a procedure belonging to the general linear modeling family. “It is a comprehensive statistical approach to test hypotheses about relationships among measured and latent variables” (Sousa & Kwok, 2006). SEM takes into consideration “the modeling of interactions, nonlinearities, correlated independents, measurement error, correlated error terms, multiple latent independents each measured by multiple indicators, and one or more latent dependents also each with multiple indicators” (Garson, 2006). Variables in SEM have the ability to reciprocally influence one another. SEM also has the advantages of being flexible in its assumptions, allowing the testing of a model rather than individual coefficients, reducing and modeling error terms, and being able to handle more complicated data. SEM also requires a large sample size; the current sample is sufficient.

Maximum likelihood estimation (MLE) was used to compute the structural coefficients. The key assumptions associated with this approach are large sample size, indicator variables with multivariate normal distributions, valid specification of the model, and continuous indicator variables (although ordinal measures also are often used). The fit of the different models was evaluated by examining various fit statistics. A Chi-square statistic is used to assess the magnitude of the discrepancy between the sample and fitted covariance matrices. A significant test indicates a poor fit. Chi-square tests are sensitive to large sample size, and therefore a small discrepancy could lead to the rejection of a model, even though it may fit the data well. Thus, Chi-square divided by degrees of freedom was considered good fit if less than 3.84. The Comparative Fit Index (CFI) ranges from 0 (indicating poor fit) to 1.00 (indicating perfect fit) and is derived from the comparison of a restricted model (i.e., one in which structure is imposed on the data) with a null model (i.e., one in which all observed variables are uncorrelated with each other). The CFI provides a measure of complete covariance in the data; a value greater than 0.90 indicates a psychometrically acceptable fit to the data and suggests that 90% of the covariation in the data can be reproduced by the model. The Root Mean Square Error of Approximation (RMSEA), a measure of the discrepancy between the observed and model implied covariance matrices adjusted for degrees of freedom, and the Standardized Root Mean Square Residual (SRMR), a measure of the average of the standardized fitted residuals, also were examined.

For the current purposes, SEM used goodness-of-fit tests to determine how well the specified mediational model fit the data, as compared to the non-mediational alternative models. The author initially completed the analyses without controlling for earlier levels of the mediating and outcome variables. The analyses were then re-calculated the analyses and controlled for

initial levels of the variables of interest (i.e., hopelessness and externalizing) because of the association between these scores across time; because suicidality was not assessed at Time1, earlier internalizing levels were not controlled. Models were constructed for the entire sample, as well as for males and females separately, to assess any differences in model fit based on gender. Moderators of these models were also considered.

Because previous literature asserts that approximately one-quarter to one-half of adolescent samples endorse moderate to high levels of hopelessness, another question was what percentage of the children in the current sample endorse high levels of hopelessness from early to late adolescence. Related to that was the question of what separates this group of individuals from those with low levels of hopelessness. The model is addressing the sample as a whole, but what are the characteristics of the “extreme” sample with especially high levels of hopelessness? How do they compare to the rest of the sample on not only risks, but also on protective factors? Thus, ANOVA’s were employed to examine the differences in the means of predictors and outcomes in individuals with low versus high levels of hopelessness. Since literature suggests an important role for protective factors in this population, they were also included in the ANOVA’s. Additionally, correlations between predictors and outcomes were compared across the two groups.

### 3.3 QUESTION 1 – COMPARISON OF ALTERNATIVE MODELS

#### 3.3.1 Hopelessness as a mediator

Initially, all variables were entered into a structural equation model according to the mediation structure described (i.e., the model including all variables). Modification indices were used to determine the baseline model. Observed variables included neighborhood safety, parental efficacy, antisocial attitudes, academic performance, and hopelessness, while latent factors included internalizing and externalizing. In addition, measurement errors and residual errors were allowed to be correlated. This was done to improve model fit, and resulted in the first hypothesized model containing both direct and indirect effects of predictors on outcomes ([Figure A3](#); Model A). Results for the overall model are shown in [Figure A3](#). A complete list of standardized and unstandardized parameter estimates for all models presented is available from the author upon request. The model fit was adequate:  $CFI = 0.931$ ,  $SRMR = 0.052$ , and  $RMSEA = 0.072$ , (Hu & Bentler, 1999). *Chi square* for the model was 71.767 based on 26 *degrees of freedom*, which indicates a non-significant Chi-square per degree of freedom.

Two other nested, alternative models were compared to the hypothesized mediational model, one containing academic performance as a mediator without hopelessness ([Figure C2](#); Model B), and the other containing no mediation, only direct effects ([Figure C3](#); Model C). For Model B, model fit was inadequate:  $CFI = 0.811$ ,  $SRMR = 0.087$ , and  $RMSEA = 0.108$ . *Chi square* for the model was 158.452 based on 32 *degrees of freedom*, which indicates a significant Chi-square per degree of freedom. For Model C, the model fit was inadequate as assessed by  $CFI$ , at 0.799,  $SRMR$ , at 0.092, and  $RMSEA$ , at 0.103. *Chi square* for the model was 170.634 based on 37 *degrees of freedom*, which indicates a significant Chi-square per degree of freedom.

Chi-square difference tests indicated a significant difference between Models A and B ( $p < 0.001$ ), between Models A and C ( $p < 0.001$ ), and between Models C and B ( $p < 0.05$ ), suggesting Model A best fits the data, followed by Model B, with Model C demonstrating the worst fit. More specifically, a model containing mediation via hopelessness and academic performance was a better fit with the data than a model containing just academic mediation and a model containing no mediation. However, there was no statistical mediation via hopelessness, only via academic performance, operating between risks and hopelessness.

Approximately twenty percent of the variance in hopelessness was accounted for in Model A. While there was a slight increase in the amount of variance accounted for in “internalizing” in Model A, as compared to the alternative models, the  $R^2$  was still minimal (approximately  $0.05$ ), which is similar to “externalizing,” which is also roughly  $0.05$ . Therefore, none of the models, including the mediational model, accounted for a substantial proportion of variance in adjustment outcomes.

In looking at each of the observed variables and latent variables in the models, each model consistently demonstrated significant positive correlations among the T1 variables of neighborhood safety and parental efficacy, and both of these variables demonstrated negative associations with antisocial attitudes. Additionally, there was also a significant positive correlation between internalizing and externalizing ( $0.633-0.646$ ), as well as between the error terms for suicidality and aggression ( $0.192-0.196$ ) and between stress and worry ( $0.267-0.291$ ), all indicators of the latent variables. It was found that antisocial attitudes were consistently positively related to the externalizing outcome across models, with Betas ranging from  $0.154-0.168$ . They were also negatively related to academic performance in both mediational models ( $-0.122$ ). When hopelessness was included in the model, it was positively predicted not only by



antisocial attitudes ( $0.146$ ), but it was also negatively predicted by parental efficacy and academic performance ( $-0.143$  and  $-0.340$ , respectively). However, hopelessness did not significantly predict internalizing or externalizing outcomes in the mediational model. Neighborhood safety also did not play a predictive role in any of the models.

When trimming away all non-significant paths to determine a minimum model to explain the data, a model was obtained with adequate fit:  $CFI = 0.933$ ,  $SRMR = 0.061$ , and  $RMSEA = 0.061$ . *Chi square* for the model was  $83.715$  based on  $37$  degrees of freedom, which indicates a non-significant Chi-square per degree of freedom. The amount of variance accounted for in hopelessness ( $R^2=0.198$ ), internalizing ( $R^2=0.046$ ), and externalizing ( $R^2=0.023$ ) was not significantly different from the variance accounted for in the hypothesized baseline model (Model A). Moreover, the only change in paths within this model compared to the hypothesized baseline model was the addition of a positive path from hopelessness to internalizing problems ( $0.215$ ).

### **3.3.2 Examining change in hopelessness**

Taking into account the likelihood that hopelessness, externalizing, and internalizing problems also may have been present at T1, analyses were recomputed, this time controlling for earlier levels of the later occurring variables, particularly T1 hopelessness and T1 and T2 externalizing. More specifically, these analyses examined the impact of earlier predictors on change in hopelessness, while also considering the impact of the change in hopelessness on externalizing problems, after controlling for earlier externalizing problems. Because suicidality was not adequately assessed at T1, internalizing was not controlled; however, T3 internalizing was still included in the model as being predicted by change in hopelessness. Models A, B, and C and

their results are presented in [Figures A4](#), [C4](#), and [C5](#); they are the same as the aforementioned Models A, B, and C with the exception of the inclusion of T1 hopelessness and T1 and T2 externalizing in the current models.

Results for Model A are shown in [Figure A4](#). The model fit was adequate:  $CFI = 0.902$ ,  $SRMR = 0.067$ , and  $RMSEA = 0.072$ . *Chi square* for the model was 285.845 based on 103 *degrees of freedom*, which indicates a non-significant Chi-square per degree of freedom. For Model B, *Chi square* for the model was 424.383 based on 115 *degrees of freedom*, which indicates a non-significant Chi-square per degree of freedom. However, other fit indices indicate inadequate model fit;  $CFI = 0.835$ ,  $SRMR = 0.094$ , and  $RMSEA = 0.089$ . As with Model B, *Chi-square* for Model C was non-significant per degree of freedom,  $Chi-square=329.889$ ,  $df=103$ ; however, the model fit was inadequate as assessed by  $CFI$ , at 0.873,  $SRMR$  at 0.083, and  $RMSEA$ , at 0.080. Chi-square difference tests suggested that consistent with the previous findings, Model A, containing mediation via hopelessness, appears to best fit the data, followed by Model C, with Model B demonstrating the worst fit.

Approximately twenty-two percent of the variance in hopelessness was accounted for in Model A. While there was a slight increase in the amount of variance accounted for in “internalizing” in Model A, as compared to the alternative models, the  $R^2$  was still minimal, (approximately 0.048). The amount of variance accounted for in “externalizing” was 0.313. This was considerably higher than the variance accounted for in Model A without the control variables. The same pattern held for Models B and C, with each accounting for more variance than in Models B and C without the control variables. The difference in the amount of variance accounted for in Model A as compared to Models B and C was minimal (0.02 across internalizing and externalizing).

In terms of parameter estimates, the same general pattern of results emerged for the models with control variables compared to the models without control variables. Similar to the aforementioned models without the control variables, each model consistently demonstrated significant positive correlations among the T1 variables of neighborhood safety and parental efficacy, and negative associations of each of these variables with antisocial attitudes. Additionally, there was also a significant positive correlation between internalizing and externalizing ( $0.494-0.526$ ), as well as between the error terms for suicidality and aggression ( $0.186-0.193$ ) and between stress and worry ( $0.251-0.283$ ). Additionally, in Model A, T1 hopelessness was predictive of T2 hopelessness, and T2, but not T1, externalizing was positively predictive of T3 externalizing. It was found that antisocial attitudes were consistently negatively related to academic performance in both mediational models ( $-0.122$ ). When hopelessness was included in the model, it was positively predicted not only by antisocial attitudes ( $0.106$ ), but also negatively by parental efficacy and academic performance ( $-0.144$  and  $-0.274$ , respectively). Hopelessness was not significantly predictive of internalizing, but it was positively predictive of externalizing outcomes in the mediational model ( $-0.117$ ). There was again no involvement of neighborhood safety in predicting later occurring variables.

### **3.3.3 Concurrent analyses**

Post-hoc analyses were conducted to determine the role of concurrent factors in identifying risks, mediators, and outcomes in this population. Particularly, a model ([Figure A6](#)) consisting of predictors, mediators, and outcomes all occurring during late adolescence was assessed for model fit.  $\chi^2=94.770$ ,  $df=26$ .  $CFI=0.932$ ,  $RMSEA=0.088$ , and  $SRMR=0.045$ , indicating inadequate fit. However, the variance accounted for in hopelessness, externalizing, and

internalizing were 0.250, 0.737, and 0.505, respectively, considerably higher percentages of variance than were accounted for in any other model presented. Additionally, there were more significant paths within this model than in any other models, with parenting negatively predicting externalizing behaviors (-0.145), neighborhood safety negatively predicting both externalizing (-0.704) and internalizing (-0.412) problems, and antisocial attitudes positively predicting hopelessness (0.456), internalizing (0.282), externalizing (0.245), and academic performance (0.152). Furthermore, an association between late adolescent hopelessness and internalizing (0.197) was observed, the only prediction of internalizing problems across models. However, late adolescent parental efficacy and academic performance were no longer predictive of hopelessness during this same period.

### **3.3.4 Summary**

In short, it appears that a mediational model containing hopelessness and academic performance fits the data better than models excluding these factors and that this model improved with the introduction of early controls for outcome variables and even more so with an examination concurrent prediction during late adolescence. However, statistical mediation via hopelessness was not supported, only mediation between risks and hopelessness via academic performance. Furthermore, the results of this mediational model showed that antisocial attitudes during early adolescence and academic performance during middle adolescence were particularly important predictors of late externalizing problems in this population. Hopelessness was not a significant predictor until control variables were factored into the model and until concurrent late adolescent predictions were examined. Internalizing problems were only predicted concurrently.

### 3.4 QUESTION 2 – INFLUENCE OF GENDER AND PROTECTIVE FACTORS

#### 3.4.1 Gender comparisons

Once the overall models were tested, comparisons were conducted to assess the extent to which the same models and results would be obtained across genders. Once again, structural equation modeling was used to examine the relative fit of Models A, B, and C (without control variables) for males and females in this sample. The models were run separately for each of the genders. Then, the fit statistics and parameter estimates were compared. Results for the male/female comparisons are shown in [Figures A5](#), [C6](#), and [C7](#). For Model A, the model fit for males was good:  $CFI = 0.947$ ,  $SRMR = 0.049$ , and  $RMSEA = 0.060$ . *Chi square* for the model was 41.825 based on 26 *degrees of freedom*, which indicates a non-significant Chi-square per degree of freedom. However, for females, Model A was only fair:  $CFI = 0.922$ ,  $SRMR = 0.067$ , and  $RMSEA = 0.078$ . *Chi square* for the model was 53.542 based on 26 *degrees of freedom*, which also indicates a non-significant Chi-square per degree of freedom. For Model B, despite non-significant Chi-squares per degree of freedom, based on other fit statistics, model fit was inadequate for both groups, with  $CFI = 0.837$ ,  $SRMR = 0.083$ , and  $RMSEA = 0.095$ , for males, and  $CFI = 0.810$ ,  $SRMR = 0.096$ , and  $RMSEA = 0.110$ , for females. The same was true for Model C, which also indicated inadequate model fit across groups. So, regardless of gender, it appears that a model containing mediation via hopelessness and academic performance is a better fit with the data than a model containing just academic mediation and a model containing no mediation.

For males, approximately sixteen percent of the variance in hopelessness was accounted for in Model A, compared to twenty-two percent for females. The  $R^2$  for externalizing for

Models A, B, and C was 0.032, 0.021, and 0.010, respectively, for males, and 0.097, 0.097, and 0.078, for females. The amount of variance was generally lower for internalizing. For males,  $R^2$  was 0.056, 0.018, and 0.012, and it was 0.093, 0.071, and 0.067, for females.

Again, the pattern of results parallels those from the total sample. Each model consistently demonstrated significant positive correlations among the T1 variables of neighborhood safety and parental efficacy, which had negative correlations with antisocial attitudes. However, the correlation between parental efficacy and neighborhood safety was only significant for males. Additionally, there was also a significant positive correlation between internalizing and externalizing (0.494-0.651), as well as between the error terms for suicidality and aggression (0.201-0.207) and between stress and worry (0.107-0.407). It was found that antisocial attitudes were consistently positively related to the externalizing outcome across models for females, with *Betas* ranging from 0.249-0.268. When hopelessness was included in the model, it was positively predicted not only by antisocial attitudes, for males only, (0.154), but also negatively by parental efficacy (-0.161), for females, and negatively by academic performance, for males and females (-0.270 and -0.387, respectively). Hopelessness was significantly positively predictive of externalizing outcomes in the mediational model, but only for males (-0.205). Consistent with the aforementioned findings, there was no prediction by neighborhood safety and no prediction of internalizing problems.

In addition to model comparisons, analyses were also completed to examine possible differences in means and correlations among variables in males and females. The means are presented in [Table B4](#) and the correlations in [Tables B5-B7](#). There were several significant gender differences in means as tested by ANOVA's. Females showed consistently higher scores than males on parenting and peer measures across time, whereas males scored higher on

neighborhood safety, aggression, and sexual activity. Additionally, females scored significantly higher than males on religiosity during early and late adolescence, while males scored higher on hopelessness and antisocial attitudes during middle and late adolescence and substance use during late adolescence. It is worth noting that although significant, some of these differences were small. Although the genders were not significantly different on academic performance during early adolescence, they were significantly different on academic performance during middle adolescence, with females scoring higher than males. Females also scored approximately 9 percentage points higher than males on academic performance during late adolescence; however, this difference was not statistically significant and is likely due to the severely reduced sample during this time period.

Of a little less than one hundred correlations across time, less than a dozen of them were significantly different across gender over time. Overall, the pattern of results suggested that the genders were more alike than different with respect to correlations, particularly at the later ages. In other words, the associations between the variables examined in the current study are generally consistent across males and females, suggesting that the variables of interest relate in the same direction and to essentially the same degree regardless of gender.

### **3.4.2 Protective factors**

It was predicted that protective factors, such as religiosity, extracurricular involvement, and positive peer affiliation at T1 would interact with T1 predictors and influence T2 hopelessness, and that T2 levels of these factors would interact with T2 hopelessness and impact T3 outcomes (Model A1). An alternative to this model was also examined, looking at moderation only from hopelessness to outcomes (Model A2). To assess the moderating role of protective factors in this

sample, interaction terms were created by multiplying each protective factor by each predictor and each protective factor by hopelessness, after first centering the variables. These interaction variables were then added to the previously specified, non-control Model A.

For Model A1 with moderators at both time points, the model fit was poor:  $CFI = 0.382$ ,  $SRMR = 0.135$ , and  $RMSEA = 0.169$ . *Chi square* for the model was 1151.511 based on 107 *degrees of freedom*, which indicates a significant Chi-square per degree of freedom. For Model A2, model fit was also inadequate:  $CFI = 0.385$ ,  $SRMR = 0.223$ , and  $RMSEA = 0.260$ . *Chi square* for the model was 1053.486 based on 44 *degrees of freedom*, which indicates a significant Chi-square per degree of freedom.

The amount of variance explained in hopelessness in Model A1 was 0.256, and in Model A2 it was 0.205, not substantially different from the variance explained in the previously presented models. When looking at internalizing, however, the amount of variance accounted for in Model A1 ( $R^2=0.450$ ) and Model A2 ( $R^2=0.460$ ) was substantially higher than in any previous models. The amount of variance explained in externalizing in Models A1 and A2 ( $R^2=0.326$  and  $R^2=0.335$ , respectively) was more than that in the baseline model; however, it was comparable to the amount obtained in the model containing control variables.

Despite the poor fit of the model, it is worth noting some of the paths. There were significant paths within each of these models, which were stronger and more abundant than in the previously presented models. It was found that T3 externalizing was positively predicted by T1 antisocial attitudes (0.125 and 0.124, respectively) and T2 hopelessness (0.346 and 0.343, respectively) in both Model A1 and A2. Internalizing at T3 was also predicted by T2 hopelessness (0.536 and 0.531, respectively). Additionally, in Models A1 and A2 there was a negative association between externalizing and the interaction term of T2 affiliation with



prosocial peers and T2 hopelessness ( $-0.371$  and  $-0.368$ , respectively), suggesting that individuals with higher levels of positive peer involvement and lower levels of hopelessness also have lower levels of externalizing problems; the same was true for internalizing ( $-0.687$  and  $-0.680$ ). For both models, antisocial attitudes negatively predicted academic performance ( $-0.122$ ), which in turn, negatively predicted hopelessness ( $-0.342$  and  $-0.340$ ). For model A2, the model examining the moderation of the links between hopelessness and outcomes without moderation of the predictors to hopelessness, it was found that parental efficacy and antisocial attitudes also directly negatively ( $-0.143$ ) and positively ( $0.146$ ), respectively, predicted hopelessness. Furthermore, in Model A1, the model examining moderation at two time points, it was found that there were significant predictions of hopelessness by several interaction terms, including parental efficacy by affiliation with prosocial peers ( $0.450$ ), antisocial attitudes with religiosity and extracurriculars ( $0.594$  and  $-0.381$ , respectively), and neighborhood safety with extracurricular involvement ( $0.360$ ). It should be noted that although there were several significant paths apparent within each of these models, these path estimates should be interpreted with caution, because the interpretation of structural coefficients within poorly specified models is generally not recommended (Garson, 2006).

### **3.4.3 Summary**

In investigating the roles of gender and protective factors in the differential outcomes of inner-city youth, there were several main results. Regarding gender, there were some differences in terms of overall fit and path estimates, including stronger associations between academics and hopelessness and an influence of early parenting on later hopelessness for females. There was also a mediating role of hopelessness between antisocial attitudes and externalizing, for males, as

opposed to the direct link between antisocial attitudes and externalizing observed for females. There was no prediction by neighborhood safety and no prediction of internalizing problems. Additionally, results suggested a greater susceptibility to externalizing risks for males, with males showing higher mean levels of antisocial attitudes and aggression, while females tended to have higher levels of positive factors, such as parental warmth and limit-setting, affiliation with prosocial peers, and academic performance.

There was also a moderation effect by protective factors, with results showing that individuals with higher levels of positive peer involvement and lower levels of hopelessness also have lower levels of externalizing and internalizing problems. When examining moderation at two time points, it was found that there were significant predictions of hopelessness by several interaction terms, including parental efficacy by affiliation with prosocial peers, antisocial attitudes with religiosity and extracurriculars, and neighborhood safety with extracurricular involvement. It should be noted that these results were obtained from models that were poorly specified.

### **3.5 QUESTION 3 – COMPARING ACROSS LEVELS OF HOPELESSNESS**

The aforementioned models examined a sample of youth with varying degrees of hopelessness. However, literature suggests that there is a subset of youth who demonstrate significant levels of hopelessness. Thus, while they may be represented within the model, they may also be a qualitatively different group, with a different risk versus protective factor profile that sets them apart from the rest of the youth in the complete sample. So, the final question addresses the primary differences between the extreme hopelessness subgroup as compared to the rest of the

sample. Groups of “low” versus “high” levels of hopelessness were constructed based on cutoffs from the literature, with scores of 4 or more representing high levels of hopelessness (Bolland, 2003). ANOVA’s were used to explore mean differences in the dependent variables, in this case all of the predictors, academic performance, outcomes, and moderators, determined by the independent variable of level of T2 hopelessness (high versus low/moderate).

The mean hopelessness score at T1 was *1.81* (*SD*=*1.759*). At T2 and T3, it was *1.92* (*SD*=*1.992*) and *1.64* (*SD*=*1.951*), respectively. At T1, T2, and T3, 81% (*N*=277), 75% (*N*=254), and 80% (*N*=272) of the sample, respectively, were in the “low” level of hopelessness group, as compared to 19% (*N*=63), 25% (*N*=86), and 20% (*N*=68) for the “high” level group. So, only 25% or less of the sample evidenced hopelessness scores that were more than one standard deviation above the mean and at or above the previously established cutoff score of 4. Of those in the low group, at T1, 48% were males and 52% were females. At T2, the numbers were 45.7% and 54.3% for males and females, respectively. At T3, 46.7% were males and 53.3% were females. In the high group, 54% were males and 46% were females at T1. At T2, 59.3% were males compared to 40.7% females. T3 was similar, with 58.8% of the group being males and the other 41.2% being females.

ANOVA’s were used to compare the means across the high and low hopelessness groups. Due to the unequal variances and sample sizes, Welch’s *t* is also presented, because it is a better measure of mean difference under these conditions (Leech, Barrett, & Morgan, 2005). The results were found to be consistent across each of these statistics. Results from the current analyses can be found in [Tables B8-B10](#). In comparing those with high hopelessness to those with low hopelessness, these groups varied consistently and in the predicted direction on measures of stress, aggression, positive peer affiliation, and antisocial attitudes, with the low

hopelessness group having lower rates of stress, aggression, and antisocial attitudes and higher rates of positive peer involvement. Neighborhood safety, worry, and academic performance were also different between the groups, as predicted, but less consistently so. Finally, sexual activity at T1 and parental efficacy and religiosity at T2, were also significantly different between the groups.

Different correlations between subgroups within a larger group can yield misleading or biased overall correlations for the total sample. Thus, differences in correlations between these two groups were examined, as well. As shown in [Tables B11-B13](#), T1, T2, and T3 correlations were largely similar for the two groups, more so at earlier time points than later ones. The pattern of correlations was similar across time points. Differences were mostly observed in the variables of hopelessness, academic performance, and affiliation with prosocial peers, with higher hopelessness showing a higher number of moderate correlations than lower hopelessness. Of 45 to 55 correlations over the three time points, 10 to 14 of them were significantly different across groups.

In sum, it was found that individuals with high levels of hopelessness were more likely to also have higher rates of antisocial attitudes and lower levels of neighborhood safety. This was possibly related to their lower levels of academic performance and subsequent higher levels of aggression, stress, and worry. These individuals also evidenced lower levels of protective factors, particularly in the domain of positive peer interactions. The associations between the variables were largely consistent across the genders, with the exception of the high hopelessness group displaying stronger relations between variables.

## **4.0 DISCUSSION**

Ethnographic literature has shown the significance of hopelessness in the lives of inner-city, African-American youth, but this idea has not been well established in the quantitative literature (Bolland, 2003). The aims of the present study were to determine whether a mediational model linking adversity and adolescent outcomes via hopelessness and school failure would explain something about the development of inner-city minority youth and would be a better fit for data from a multicohort, longitudinal study, than competing non-mediational models. The issue of whether the fit and parameters of these models were consistent across genders was also addressed. There was also the question of whether protective factors served as moderators of the relations in the models. The final issue was whether subgroup status in the extreme range of functioning was associated with increased means for risks and lower means for protective factors.

### **4.1 HOPELESSNESS AS A MEDIATOR OF CONTEXTUAL RISKS AND OUTCOMES**

Not much literature has examined the role of hopelessness or academic performance in inner-city youth as mediators of adjustment difficulties other than internalizing problems, most notably, depression (e.g., Bolland, 2003). However, the literature already reviewed suggests associations

between contextual risks and adjustment outcomes, between contextual risks and the hypothesized mediators (i.e., academic performance and hopelessness), as well as between hopelessness and adjustment outcomes. These previously established associations will be viewed in light of the results of the current study. Plausible explanations for incongruities between the results of the current study and previous studies will be discussed along with the limitations of the current research.

Three nested models were presented containing parental efficacy, neighborhood safety, and antisocial attitudes as early adolescence predictors of late adolescence externalizing and internalizing latent outcomes. The models differed in that one contained only direct links from the predictors to the outcomes, another added academic performance as a mediator between predictors and outcomes, and a third contained both academic performance and hopelessness as middle adolescence mediators. Consistent with the hypothesis, when comparing the relative fit of these models with the data, it was found that the model containing both hopelessness and academic performance as mediators was the only model demonstrating adequate fit with the data. The same was true when controlling for early adolescent levels of the outcome variables; once past behavior was taken into account and change in outcome variables was studied, the findings were largely consistent with those for the general model comparisons. However, statistical mediation via hopelessness was not supported, and in fact, hopelessness was more consistently an outcome predicted by contextual risks, relations mediated by academic performance. Therefore, the results suggest the importance, at least to some extent, of the inclusion of both academic performance and hopelessness in examining relations between early adolescent contextual factors and later adolescent outcomes but not necessarily in a mediational capacity.

Upon further examination of the specific paths within these models, it was found that several links were consistent with previous findings in the literature. It was hypothesized that negative child attitudes during early adolescence would be predictive of poorer academic performance and hopelessness in middle adolescence and externalizing problems in later adolescence. This hypothesis was largely supported in the current study, with antisocial attitudes being the most consistent predictor of outcomes; the one exception was concurrent prediction during late adolescence, when antisocial attitudes were positively associated with academic performance. The positive significant relation between early antisocial attitudes and later hopelessness also was as predicted based on findings indicating links between attributional style and expectations and hopelessness (e.g., Alloy et al., 1997; Feather, 1983), although not in an inner-city, African-American sample. This is not surprising, given the overlapping nature in these constructs, with hopelessness being a negative cognition and pessimistic way of viewing the world, not terribly different from some of the antisocial attitudes assessed. Results from the current study showing links between adolescents' early attitudes and later externalizing problems also were as expected, given that literature has shown significant relations between child cognitions and later outcomes, particularly use of aggressive strategy (Samples, 1997).

Despite support for the main study question regarding a mediational model of minority youth development, there were several unanticipated results generated when looking at the parameter estimates within the models. Counter to prediction, results demonstrated that hopelessness was not a statistically significant mediator and that outcomes were generally not predicted by any of the included variables. More specifically, it was found that hopelessness during mid adolescence was negatively predicted by parenting behaviors and academic performance and positively by antisocial attitudes, and in turn, was positively predictive of

externalizing behaviors. However, the indirect effects were not statistically significant, and these simultaneous associations were only observed when control variables were factored into the model. The prediction of externalizing by hopelessness in the models containing control variables suggests a mutual suppressor effect of hopelessness and earlier externalizing; when mid adolescent hopelessness and externalizing are included in the model together, they may mutually suppress irrelevant variance in each other (Lancaster, 1999).

Thus, it appears that hopelessness during middle adolescence is less influential in predicting later adolescent outcomes than had been speculated. This is in line with Bolland, Bryant, Lian, McCallum, Vazsonyi, and Barth (2007), who recently found that hopelessness had less impact on African-American adolescent outcomes than on Caucasian adolescents in inner-city environments, which they attributed to the majority status of African-American youths in these enclaves. When looking at the limited prediction of externalizing and internalizing by hopelessness, it may also be possible that those experiencing higher levels of hopelessness are also more likely to be those who are higher internalizers as opposed to externalizers; however, this may not be reflected in the internalizing variables assessed in the current study, as internalizing remained more difficult to predict in this study. This speaks to the larger issue of the increased difficulty in predicting internalizing problems compared to externalizing problems. Aside from measurement concerns, there are a few other reasons that internalizing may have been difficult to predict. One is that it has been found that there is a greater probability of aggression without internalizing problems in African Americans in a sample of first through sixth graders assessed with the Teacher Report Form of the Child Behavior Checklist (Tolan & Henry, 1996), which may hold true across adolescence, as well. Moreover, it may simply be easier for children, particularly in the earlier stages of adolescence, to report on concrete



behaviors (e.g., getting into a fight, threatening someone) as opposed to reporting on and being aware of their emotional states over the course of a year. Furthermore, Jones and Forehand (2003) found decreased internalizing behaviors over time in a sample of African-American school-age children. Thus, it may also be possible that by not factoring in early and mid-adolescent levels of internalizing problems, as was done with externalizing problems, a significant predictor of late adolescent internalizing problems is missing.

In contrast, academic performance during mid-adolescence did serve as a mediator (i.e., significant indirect effects) between early adolescent antisocial attitudes and mid-adolescent hopelessness; however, academic performance was not related to hopelessness concurrently during late adolescence. Academic performance has previously been shown to have some bearing on hopelessness as suggested by Brouillette (1999) and Graham (1997), who reported that early negative impressions of school relate to later expressed “cynicism,” “hopelessness,” and “anomie.” Although academic achievement also has been linked to subsequent maladjustment for a large number of children, particularly in low income environments, with early academic difficulties predicting later academic underachievement as well as later conduct behaviors (Reinke, Herman, Petras, & Ialongo, 2008), this was not observed in the current study.

One explanation for the pattern of results obtained for academic performance may be the continual decline in academic performance over development (Wood, Kaplan, & McLoyd, 2007). The mean academic performance decreased over time in the current study as well. With this decline, it is possible that by the time academic performance is explored in middle adolescence, particularly after not having taken into account earlier levels of academic performance, the children are not significantly distressed by their academic performance, and it is no longer as salient an influence on their behavior as it may be during other periods in

development. For example, it may not be until later adolescence, when children become more cognizant of their performance as it relates to their future options and as they reach an age where they can decide whether to dropout that internalizing and externalizing problems may become more apparent. It may also be the fact that scores on a once a year standardized assessment are less indicative of how a child is actually capable of performing and the commitment and interest of that child on a more consistent basis. Thus, grades may be a more useful gauge of academic achievement.

One final finding related to a modification of the hypothesized model, though incidental, was the significant prediction by concurrent factors in late adolescence, above and beyond the prediction provided based on longitudinal data spanning adolescence. Despite inadequate model fit, there was a substantial amount of variance accounted for, without including earlier levels of control variables, and there were considerably more significant paths within this model than in any other model, with parenting negatively predicting externalizing behaviors, neighborhood safety negatively predicting both externalizing and internalizing problems, and antisocial attitudes positively predicting internalizing, externalizing, and academic performance. It also was found that hopelessness in late adolescence was predicted by late adolescent antisocial attitudes, and hopelessness, in turn, was related to internalizing problems; internalizing was not predicted in any other models, with the exception of those including moderators, nor was neighborhood safety predictive in any other models. However, late adolescent parental efficacy and academic performance were no longer predictive of hopelessness during this same period.

## **4.2 INFLUENCE OF GENDER AND BUFFERS ON HOPELESSNESS AND OUTCOMES**

### **4.2.1 Gender comparisons**

African-American males are one of the most stigmatized groups in America. Not only must they contend with society's negative stereotypes of them, they are more impacted by violence and joblessness as threats to them and their masculinity (Gibbs & Bankhead, 2000). As a result, the hardships they endure often outweigh those faced even by African-American females.

Additionally, there is already literature available that suggests differential outcomes based on gender in this population, with males often exhibiting more significant difficulties and more externalizing problems than females (e.g., Bolland, 2003; Garibaldi, 1992). So, the significance of gender was studied for differences in model fit and path estimates in the proposed models. Given the overlap between the gender findings and the total sample findings, elaboration on specific paths will be minimal.

The original models, without control variables, were re-analyzed, comparing genders. By and large, the model comparison results obtained across gender are consistent with the results for the combined sample and suggest that model fit and the overall pattern of results are largely uniform across males and females. However, there was again no statistical mediation via hopelessness.

When looking at the parameters within the mediational model, although most of the paths in the model were non-significant for both males and females in the sample, there were some gender differences noted, including stronger associations between academics and hopelessness and an influence of early adolescent parenting on middle adolescent hopelessness for females.

There was also a mediating role of hopelessness (albeit not statistically significant) between early antisocial attitudes and late adolescent externalizing, for males. While quantitative literature on gender differences in hopelessness in this population is relatively limited, there is an acceptance in the literature of females being more internalizing in nature and males more externalizing (e.g., Reinke et al., 2008). In the current study, it was found that females reported significantly and consistently higher levels of positive parenting and affiliation with prosocial peers, while males reported more aggression and sexual activity. Females also evidenced higher levels of academic performance, as well as lower levels of hopelessness, particularly during middle and late adolescence.

While the genders were more alike than different, there were a couple of divergences between the groups that warrant further attention. The finding that academic performance was significantly higher for females than for males has generally been substantiated by previous research (e.g., Ensminger et al., 1996; Garibaldi, 1992; Wood et al., 2007). It has been established that a gap between male and female academic achievement in this population begins in grade school and persists throughout adolescence, which is thought to result from males' consistently lower expectation of future academic achievement, more significant history of early academic difficulties, and parent and teacher expectations and socialization practices favoring female academic promotion and biases against males. These factors have been shown to associate with males becoming increasingly "disidentified" from academic achievement while females remain "identified," resulting in a spiral of male negative academic performance over the course of adolescence (Wood et al., 2007). Hence, the current findings lend support to the existing notion that females at this age may tend to place increased emphasis on and be more influenced by achievement.

Another significant finding that has also been demonstrated in existing literature is documentation of higher antisocial attitudes and behaviors in adolescent males (e.g., Gibbs and Bankheaf, 2000; Page, 1991). Males in the current sample demonstrated higher levels of hopelessness, negative cognitions about the world and others, and engagement in sexual activity and violent acts. The lack of significant involvement in substance use is in line with literature that suggests that use is typically lower than would be expected in this population; however, these results have been largely inconsistent. The findings are also consistent with Bolland's (2003) result drawn from the larger sample of which the current subsample is derived, which showed that males tended to endorse higher levels of hopelessness and externalizing difficulties.

#### **4.2.2 Protective factors**

It has been found that while a substantial percentage of African-American youth experience moderate to high levels of hopelessness and other maladjustment, there is an equally substantial portion of inner-city youth who do not (Bolland, 2003). Thus, another issue addressed was the moderating role of protective factors.

Limited extant research has found that sports participation and increased after-school activities have been associated with longitudinal adjustment, particularly school engagement and academic self confidence (Jordan, 1999; Posner & Vandell, 1999). Because of peers' significance during childhood and adolescence and the finding that inner-city youths are more likely to conform to the view of their peers than that of a parent (Taylor, 1991), positive peer affiliation was also deemed an important buffer. Religiosity also has been shown to have an inverse direct effect on substance use and sexual behavior (Wills et al., 2003), decreased adjustment problems (Christian & Barbarin, 2001), and increased psychological functioning

(Ball et al., 2003) in African-American youth. Hence, religiosity, positive peer affiliation, and extracurricular involvement were explored as potential significant moderators of associations within the models.

Fit statistics were obtained for two models, one with moderation at two time points (i.e., moderation of relations between predictors and hopelessness and between hopelessness and outcomes), and the other with moderation at one time point (i.e., moderation of relations between hopelessness and outcomes). The significant paths within the models were consistent with the aforementioned report of the findings from previous model comparisons. Unique to these models, however, was that for both models, hopelessness in middle adolescence was associated with both internalizing and externalizing problems in later adolescence. Positive peer affiliation and extracurricular involvement were also significant moderators in both models, moderating relations between hopelessness and both internalizing and externalizing problems and between parental efficacy and antisocial attitudes and hopelessness. However, while there were significant paths and interactional terms, both models evidenced very poor fit, and caution in the interpretation of the results is recommended.

### **4.3 DIFFERENCES IN HOPELESSNESS SUBGROUPS**

Expectation of early death and an attitude of giving up have been recurring themes in ethnographic data on this population (Holzman, 1996; Kotlowitz, 1987). Quantitative results have also suggested that approximately 25% of inner-city females and 50% of inner-city males evidence moderate to high levels of hopelessness (Bolland, 2003). In contrast, 50-75% of youth in the current population fell into a category of low levels of hopelessness. So, the final set of

analyses attempted to elucidate factors differentiating the members in the moderate to high levels of hopelessness group as compared to those with lower levels of hopelessness. ANOVA's were completed to compare mean levels on each of the variables of interest; correlations amongst the variables were also compared.

One of the most striking findings was the limited presence of hopelessness in this sample. The results indicated that moderate to high levels of hopelessness were observed in 25% or fewer of the sample across the three time points. This is lower than the levels found in previously conducted studies with participants from the larger sample from which this current sample is drawn (Bolland, 2003). The low prevalence of significant levels of hopelessness also is not consistent with the ethnographic reports of hopelessness as a pervasive problem in many inner-city environments (e.g., Greene, 1999; Holzman, 1996). The aforementioned results pertaining to model fit suggest a possible mediational role of hopelessness in this population, however, the rates of hopelessness in the current study do not lend quantitative support to the notion of it being as sweeping a problem as indicated in the qualitative literature, at least not in the current sample.

One possible explanation for the differences in the results for the current study and previous studies was the difference in age group. As previously mentioned, it is possible that hopelessness does not become an influential factor until late adolescence, which is consistent with the higher relations in the late adolescence concurrent results. Because other studies have included youth across various developmental periods, it is likely that this may have clouded the results of those studies, with the older youth possibly driving the frequency of hopelessness and the associations between hopelessness and later outcomes. Bolland and his colleagues (2007) argue that hopelessness has actually been shown to decline with age. However, that was not

found in the current study, with hopelessness remaining relatively stable. It may be the case that the discrepancy in results is due to methodological variations in the sample and design of the studies, with the current study focusing on the longitudinal development across adolescence of a circumscribed group of youth. Additionally, Bolland et al. (2007) recently reported a recommendation for the use of a 2- point cutoff (as opposed to 4- point) to determine high versus low levels of hopelessness for the abbreviated scale, which would have changed the results because the mean score in the current sample was close to two.

Despite the low frequency of hopelessness observed in this sample, the importance to and ramifications for individuals experiencing high levels of hopelessness still exists. So, although only one-quarter or fewer of the participants evidenced moderate to high levels of hopelessness over the course of adolescence, it is important to consider the ways in which these individuals differ from their lower hopelessness peers. In looking at comparisons across the high and low hopelessness groups, most of the differences between the groups were on the variables of stress, aggression, positive peer affiliation, and antisocial attitudes in the predicted directions consistently across adolescence. Additionally, neighborhood safety and worry were lower for low hopelessness individuals later in adolescence while academic performance was higher during early and middle adolescence.

These findings suggest that there may be some defining features within each of these populations that make each group differentially susceptible to various risks and positively influenced by various protective factors. Furthermore, these findings mirror those in which Bolland (2003) found significant differences between individuals with low versus high levels of hopelessness on the variable of violence. Hence, recognizing subgroups of individuals within a larger population who may have more vulnerability to contextual risks and maladjustment can



provide clarification of previously inconsistent findings, as well as inform both our future research and intervention efforts.

#### **4.4 SUMMARY OF RESULTS AS RELATED TO INNER-CITY, MINORITY YOUTH DEVELOPMENT**

According to the developmental psychopathology perspective and transactional framework, risks and outcomes can exist across development and can change over time, leading to development being influenced by both history of events as well as current factors (Cicchetti, 1986; Sameroff & Seifer, 1983). Therefore, the developmental challenges and concerns present over the course of adolescence evolve, possibly indicating a need for a change in the risks and assessment of these risks over a developmental span.

When applying this concept to inner-city, minority youth development, it appears that these youth face an early disadvantage as they contend with a host of contextual risks, and, in some cases, minimal protective factors. In the current study, these early adolescent risks were found to include child cognitions (i.e., antisocial attitudes), which almost consistently predicted later hopelessness, academic performance, and externalizing problems, and parental warmth and limit-setting.

While wrestling with these early risks, children are also developing increased autonomy and becoming more cognizant of their futures and the limitations thereof. Part of this growth involves participation in the school environment. Almost immediately these children suffer the consequences of the mismatch of school and neighborhood expectations, as they flounder in an educational system that is ill-prepared to meet their needs. Community leaders have commented

that "...We are setting children up for failure from the start...Research shows very clearly that if you provide effective...early childhood education, the rate of failure is much less significant throughout that child's academic career" (Blanchett, Mumford, & Beachum, 2005). Males in particular become increasingly disassociated from academics while females remain connected, leading to an ever increasing gap in academic achievement across the genders. With exposure to repeated early academic failures, inner-city youth soon feel as if their efforts are futile and abandon hopes of attaining their goals via mainstream means. However, this may only be true if the risks and failures are not tempered by early protective factors, particularly positive peer affiliation and extracurricular involvement, which were shown to moderate the associations between early risks and the development of hopelessness in the current study.

The findings that early defeatist attitudes and academic performance were generally associated with hopelessness in this sample fall in line with previous literature. From the current study, it is conceivable that this hopelessness is not defined as a psychologically important construct until later in adolescence, after repeated failures and as children experience increases in their thinking about and planning for their futures. In the case of some inner-city, minority youth, it may also be when they begin to recognize societal barriers to goal attainment. While Bolland et al. (2007) suggested a downward trend in hopelessness across adolescence, this may be a function of the samples explored. It is around this same time that exposure to neighborhood violence becomes salient in predicting late adolescent outcomes, and parental efficacy no longer associates with the youths late adolescent outcomes. This seems to suggest that during later stages in development, when the child's social world expands, opportunities for negative community encounters increase and supervision and limit-setting become increasingly difficult.

Those who see no prospect of a positive future or doubt they will survive long enough to have a future at all may consequently act out. In a previous qualitative study, when asked about future plans and aspirations, one young interviewee stated, “[It’s] hard to say. I could be dead tomorrow. Around here, you gotta take life day by day” (MacLeod, 1987, p.61; as cited by Burton et al., 1996). Although existing literature found significant associations between hopelessness and later externalizing and internalizing, the associations were inconsistent in this study for externalizing and virtually non-existent for internalizing. It is quite possible that in surroundings where violence is more likely to be experienced and toughness more necessary and valued, it is easier for children to express acting out behaviors, as they are likely more acceptable than feelings that require more vulnerability. Furthermore, based on the results from the current study, it is also more likely that males and those individuals with a history of externalizing difficulties and high levels of hopelessness will be more susceptible to later maladjustment.

As far as the general developmental course of risks and protective factors in this sample, these findings suggest that history is important, but at this age, it may be that more proximal issues are most important, because youth are becoming increasingly independent and interactive with their growing surroundings. These findings may also reflect the fact that the longitudinal nature of this study spanned a period of about 7 years. There were a number of transitions that could have occurred over the course of such an expansive timeframe that may not have been adequately assessed. Related to this point is that some of these predictors may have shorter-term effects that may not be sustained over the course of a two-year timeframe, particularly if these risks did not persist continuously over the course of adolescence.

## 4.5 LIMITATIONS

While the present paper was somewhat novel in its aim and served as an expansion to the relatively sparse, longitudinal, theoretically and developmentally informed, quantitative research in this population, it is not without its limitations. One may view these limitations as being methodological and/or conceptual in nature, organizational distinctions that may explicate their relations to the aforesaid discrepant findings between the literature and the current study.

Methodologically, the first concern relates to the sample, which was from the Mobile MSA in Alabama. Mobile MSA is a southern Metro area containing close to 400,000 individuals. There has been economic growth and development in Mobile over the last decade. Looking just at the city of Mobile, which is the most populated segment of the MSA, according to 2006 census data, there were 73,057 households out of which 29,963 were married couples living together 15,360 had a female householder with no husband present, and 3,488 had a male householder with no wife present. It is a racially mixed city with close to half of the population being African American. The median income for a household in the city was \$37,439, and the median income for a family was \$45,217. The per capita income for the city was \$21,612, and 21.3% of the population and 17.6% of families were below the poverty line.([www.wikipedia.org](http://www.wikipedia.org)). In terms of academic performance, roughly 87% of the students who were enrolled in career/tech classes at their secondary schools successfully completed the programs and went on to obtain careers in their respective fields or enrolled in post-secondary studies. The 2006-2007 Report Card for Mobile County from the State of Alabama School Board ([www.mcpss.org](http://www.mcpss.org)) also indicated that approximately 70% of Mobile's students were meeting or exceeding the state's Adequate Yearly Progress evaluations and passing the high school graduation examination. This was true across most demographics, including breakdowns of

students based on race and poverty status, Additionally, crime statistics indicated that crime rates averaged 56 “per 1000 population,” and violent crimes averaged “3.4 per 1000 population,” indicating minimal frequency ([www.cityofmobile.org](http://www.cityofmobile.org)). So, it is conceivable that Mobile may differ largely from a more urban area in a larger city (e.g., Chicago, Los Angeles) in terms of the type, frequency, and severity of risk exposures. It also seems to fare better than most in terms of economic growth and stability, as well as educational opportunity and attainment for its minority youth. This suggests a need to quantitatively examine this construct across other geographic contexts, which has yet to be done. Taking it a step further, examining this construct in remote rural, African-American children and adolescents may shed some additional light on longer-term adjustment and maladjustment within the larger African-American community.

Also related to sample issues was that of the age of the participants. It has yet to be determined at what age hopelessness appears within this population and at what age these youth can accurately assess and articulate their internal experiences. It may be that were a younger age group examined, when early risks are particularly salient, or an older age group, when adolescents transition into young adulthood and face additional societal concerns and pressures, that very different results would have been obtained. The somewhat arbitrary classification of youth into the 9-12 year old age group also could have clouded the results.

One of the most significant measurement concerns is the sole reliance on self-report. Children may not necessarily be the most reliable informants, as their perceptions may be skewed. As with other respondents, they may succumb to social desirability or exaggeration tendencies. Furthermore, lack of awareness and insight into their behaviors, fear of consequences related to their disclosure, lack of investment in the project, and lack of trust in the researchers could all potentially influence how they answered very loaded questions about their ideas and

behaviors. Although children were assured of confidentiality, asked to respond honestly and appropriately, and were instructed to ask the monitors should they have any questions, there is no guarantee that the children were forthright in their responses. It may have been that children were comfortable providing honest responses for more benign questions and less so with more invasive questions (e.g., sexual activity and substance use). Thus, there may have been pressures for the child to respond favorably, particularly given that the assessment usually occurred in a group context, consequently minimizing the levels of distress and maladjustment that might otherwise be seen in this population. However, it is also possible that those children willing to acknowledge negative behaviors and responses answered in that way to most items, which may suggest an overestimation of effects in the current study. So, having outside reports from parents, teachers, and others could help establish the veracity of the children's responses and could provide information on the children as they present across contexts and how they appear to others. Academics was the only non-self report measure in the current study. Therefore, court records or other objective sources of information may have been helpful in uncovering these youths' actual behaviors and experiences.

In addition to the reliance on self-report, the forced choice, dichotomous nature of most of the questions left no room for gradation of responses, forcing children to think in absolute terms about their experiences without room for clarification. The appeal of ethnographic approaches is that they permit qualifications of responses and allow one to capture the complexity and ambiguity in their experiences, rather than confining them to an unelaborative yes or no. The use of Likert scales also would permit a greater degree of variation in participant responses. So, the concrete nature of the question and answer style may have masked important information regarding the children's daily encounters.

Apart from the nature of the questions, the adequacy of the composite measures could have also influenced the results. For a few of the measures, particularly for the protective factors, reliabilities were below what is generally considered as acceptable, leading one to cautiously and conservatively interpret their results. Given that they were the best measures available, they were included in the study for the sake of preliminary observation to guide future research, but caution must be exercised in interpreting the results utilizing these measures in the current study.

While the measurement model was adequate, there were other variables not assessed via the current questionnaire that would have been better indicators of the latent constructs, particularly for internalizing (e.g., depressed mood, irritability, other depressive/anxious symptomatology). Family context was also focused primarily on warmth and limit-setting, without considering family composition, socialization practices, or general family functioning. So, a more complete view of family context may have added to the results. Additionally, returning to the issue of the protective factors, the selection and compilation of various items from a comprehensive yet uncategorized questionnaire made establishing an adequate measure of the variables of interest difficult, especially when there were few items associated with the construct. This is in contrast to some other studies that use accepted and sometimes standardized questionnaires in assessing their constructs of interest. One example of the impact of the measure on the current results is that of the prediction by antisocial attitudes. The nature of the attitudes and beliefs assessed lent themselves more towards externalizing areas than internalizing areas (e.g., attitudes about the use of violence, hostile intent of others) and thus, possibly partially explaining the lack of association with internalizing problems.

Another conceptual and methodological issue is that of the study design (i.e., the time points selected for the risks, mediators, and outcomes). There was an extended period of time, 2-

3 years, between the time points assessed, which is also different from the previous literature, where follow-up is usually over the course of a shorter period of time. The timeframe was chosen to examine the impact of the risks and mediators across a larger developmental span. It may well be the case that were the timeframe more restricted, more associations would have been seen, which is suggested by the findings from the concurrent analyses completed. Additionally, the superficial examination of gender differences, protective factors, and comparisons between extremes and the rest of the sample will hopefully serve as a catalyst to move researchers into the direction of exploring these issues in greater depth; however, the level of current analyses allowed only limited conclusions to be drawn from the data on this issue.

As far as conceptual matters, the author has presented one possible model with a specified number of pathways via which contextual factors may contribute to the development of hopelessness and later maladjustment. She acknowledges, however, that neither this model nor this review is exhaustive, and there are other equally plausible factors that could have been included. Although Bolland (2003) controlled for SES via sample selection, it is quite possible that subtle variations in income and SES could have significantly impacted the results, but this could not be determined, as actual SES information was not available. Other factors also possibly influencing the results but not explored were paternal involvement, which is generally lower in this population, and coping style, which has the potential to affect how one responds to his or her environment.

It should be reiterated that the intention of this model of development was to synthesize previously disjointed bodies of literature and present one possible testable scheme of development in minority, inner-city youth. This study did not include adequate consideration of those children who experience later maladjustment in the absence of hopelessness or a closer



examination of those children who do not become hopeless at all. It is in these cases that child characteristics (i.e., the child's biological predisposition to certain responses and behaviors) and peer relations may become increasingly influential and worthy of further consideration. The bi-directionality of effects also was not addressed in the current study, which is important particularly in regards to determining both the origins and outcomes associated with hopelessness; findings suggest a bi-directional influence of academic performance and hopelessness that was not assessed here.

The comprehensive, integrative model of development (Jones, 2006) included more variables and was more temporal in nature than the models explored in this context. Hence, as related to the last points of variable inclusion and the timeframe, given the significant correlations amongst the contextual variables, which are in line with existing literature, one may want to consider the impact of these variables across time on a finer time scale.

## **4.6 FUTURE DIRECTIONS**

Admittedly, there are still holes in the literature that need to be filled, but the hope is that this comprehensive review will serve as a springboard for researchers to begin to delve into this relatively unexplored region. This area of research is in its formative years, so there are a number of equally plausible and appropriate directions future researchers could pursue. As previously mentioned, the inclusion of every possible risk and protective factor was impossible. However, in reviewing the literature, future examination of these issues should take into consideration factors, such as maternal support, including reliance on extended kinship and paternal involvement (Burchinal, Follmer, & Bryant, 1996; Lamborn and Nguyen, 2004); additional

family variables, like family composition (Zimmerman, Salem, & Maton, 1995) and racial socialization strategies (Stevenson et al., 1997); maternal age, as teenage mothers evidence greater problems (Bowie, 2004); effects of joblessness (Wilson, 1991); effects of early childcare experiences (Connell & Prinz, 2002), and last, but certainly not least, a more extensive look at peer affiliations (Tolan, Gorman-Smith, & Henry, 2003), including gang involvement, as this is an increasing problem in inner-city environments (Blakemore & Blakemore, 1998).

Age is another important factor, particularly in this population, in which children are said to have an “accelerated life course” (Burton, Obeidallah, & Allison, 1996) because of a premature evolution into adult roles and responsibilities. Age effects were difficult to ascertain in the current review because of a lack of focused literature on one age-group in this population. Thus, future research would be helpful in determining whether the age ranges specified in the model are appropriate, as children may be experiencing hopelessness even before it is indicated based on this model.

Additionally, future research should utilize longitudinal designs to better address the issue of when each of the risks occurs in the model in relation to the other, presumably subsequent, risks. While the current model implies a chain of causally linked events, the data are not available to support these claims; the argument can certainly be made for other equally plausible third variables that may influence the course of developmental and later adjustment. Researchers also should consider both person-focused as well as variable-focused analyses, so we can better identify which risks are associated with the development of hopelessness and which individuals are most susceptible to the development of hopelessness. Lastly, the need to further explore moderators associated with divergent hopelessness trajectories and pathways is merited.

Ethnographic literature has consistently documented the presence and influence of hopelessness on inner-city youth. Additionally, the current findings showed a possible mediational role of hopelessness in this population. So, having identified hopelessness as one of the problems affecting inner-city adolescents, the final question becomes how to go about targeting it. Ideally, we would like to right the societal wrongs that have created unequal playing fields and to uproot these families from their harmful surroundings and give them a fresh start in new surroundings. This, of course, is not plausible. Instead, we need to develop comprehensive, multilevel interventions aimed at serving the child, family, and the neighborhood, to produce the most far-reaching impact. To begin with the neighborhood context, the primary concerns should focus on improving community solidarity and safety, possibly via focus groups and/or a central location or facility where the community can have reliable resources and can convene on a regular basis. Outreach efforts to deter community violence are yet another powerful way to improve the neighborhood context. Soliciting involvement from young men and women from the neighborhood who have participated in the violence and found an alternate way of surviving in their environment would be an ideal way to reach those youth who feel as if they do not any other options.

Addressing school disparities is also another critical element. Data suggest a pressing need for school reform and consideration of child characteristics in this venue. Educating teachers and other personnel about culturally sensitive practices and helping minimize the mismatch between school and home environments is critical, particularly as this mismatch not only directly affects the children, but affects the level of parental comfort and involvement as well (Schofield et al., 2007). Additionally, the attention to basic school resources, both personnel

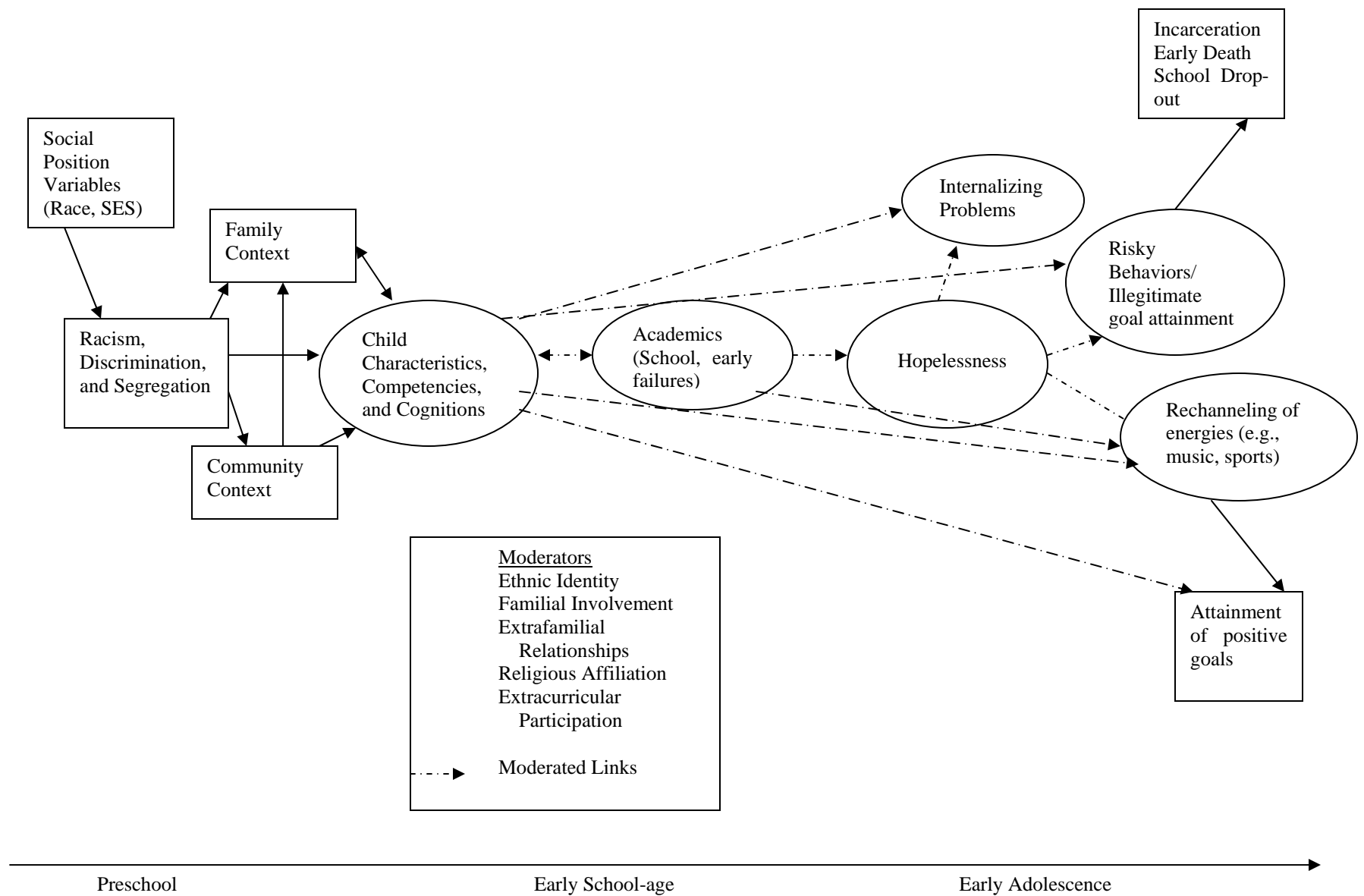
and physical, is necessary to ensure the school functions at a standard comparable to non-inner-city schools.

It also would behoove applied researchers to simultaneously intervene at the family level. Simple provision of financial resources may help lessen some of the burden on these families and undoubtedly will affect their parenting practices; direct intervention on their parenting practices may be useful, also. Mothers may greatly benefit from having a counselor or general supportive presence, particularly if their social support network is not strong.

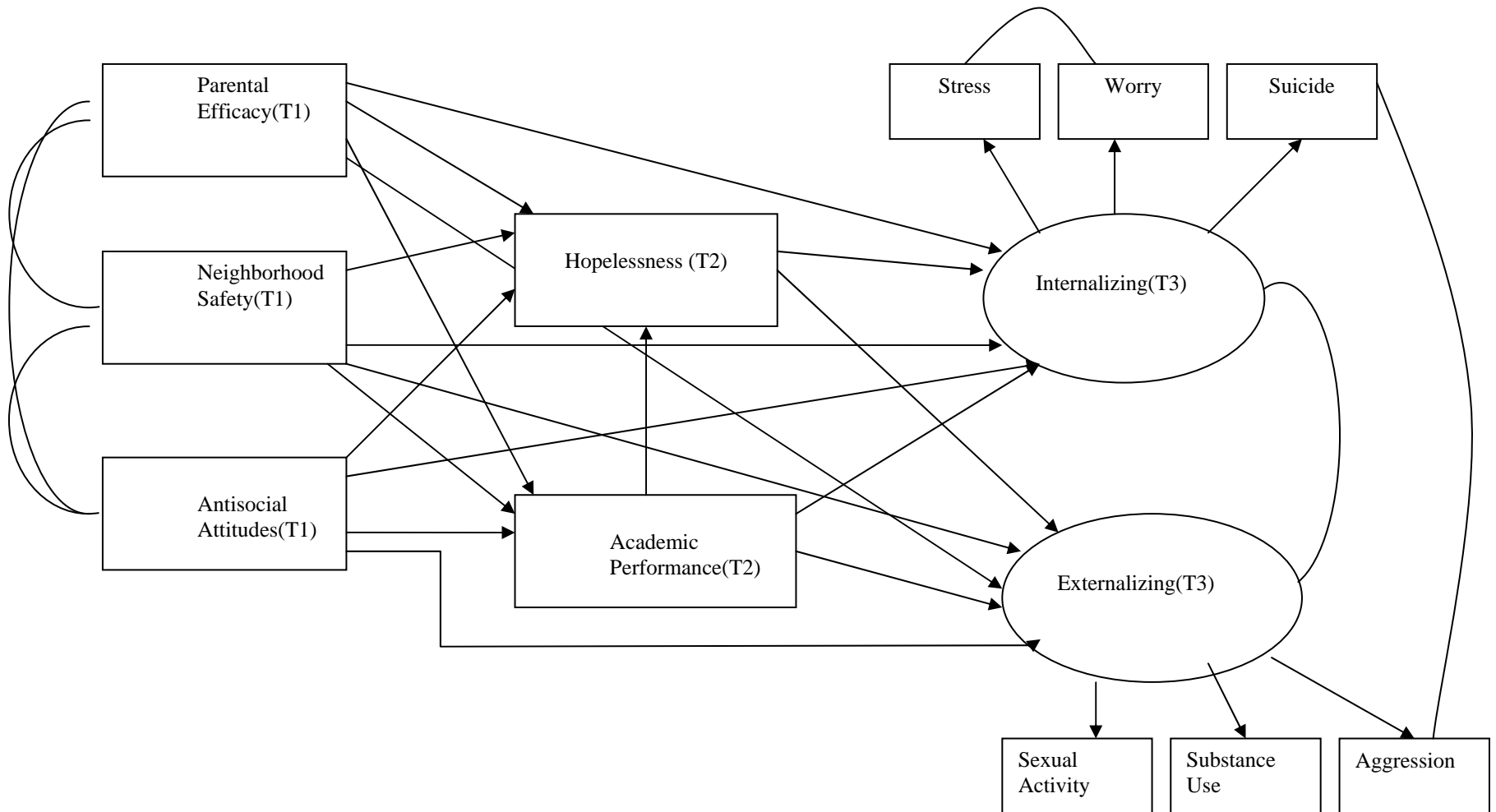
Last, but not least, the ultimate goal is to utilize resources and strategies that will help children maintain a sense of a future and a sense of purpose. It imperative that we instill in these youth, not only a sense of security about surviving into the future, but also the necessity of planning for the future to be able to attain what they want out of their lives. Part of this may simply include increasing the presence of known protective factors in their environments. While there are programs (e.g., Garrett, Ng'andu, & Ferron, 1994; Jordan & Cooper, 2003; Mahiri, 1994) that have taken steps toward this end, great strides still must be made if we are to see these youth reach their full potential.

## **APPENDIX A**

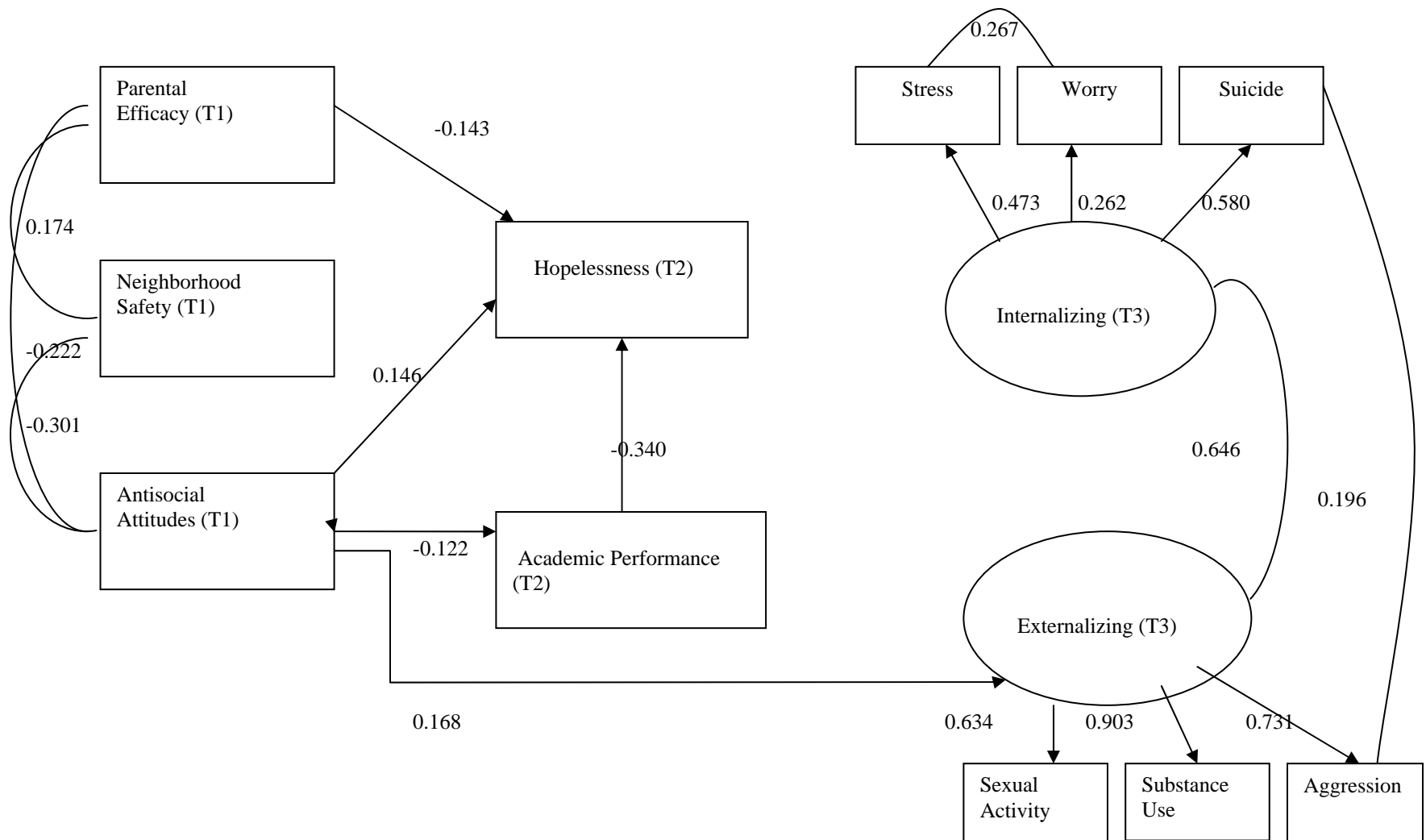
### **PRIMARY FIGURES**



**Figure A1: Integrative Model of the Development of Hopelessness in Minority, Inner-City Youth**



**Figure A2: Hypothesized Mediation Model**

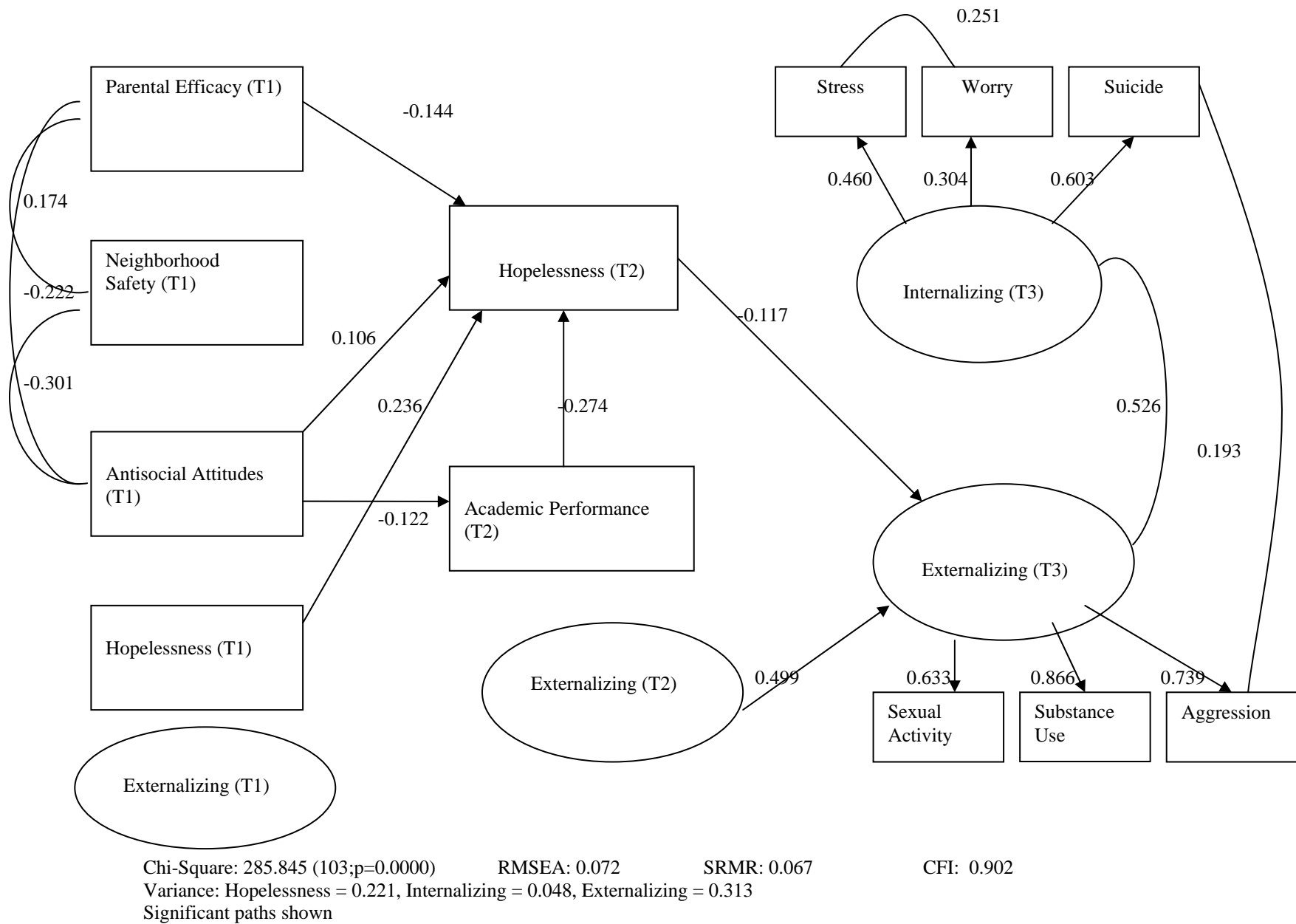


Chi-Square: 71.767 (26;  $p=0.0000$ )      RMSEA: 0.072      SRMR: 0.052  
 Variance: Hopelessness = 0.205, Internalizing = 0.051, Externalizing = 0.052  
 Significant paths shown

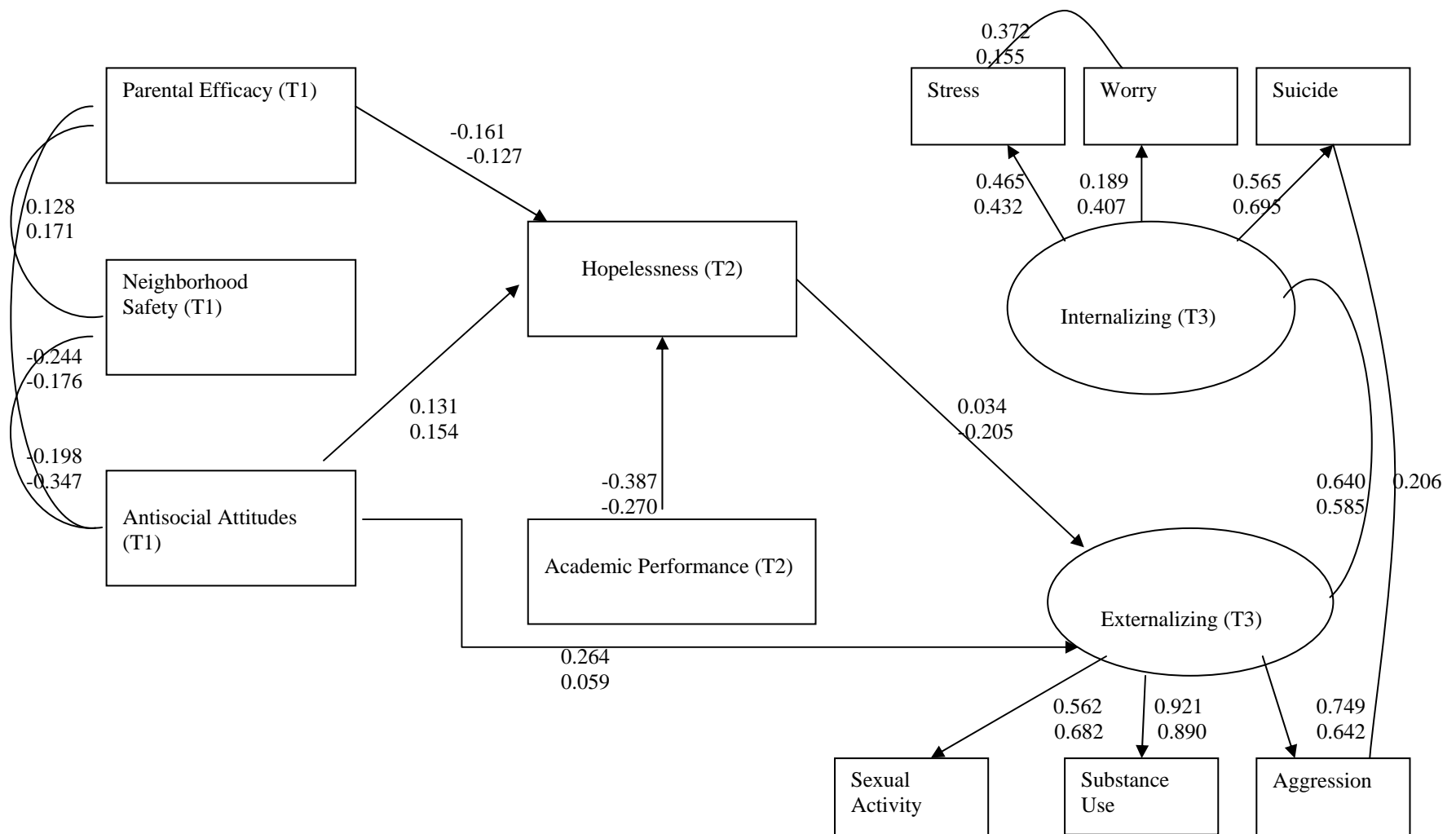
CFI: 0.931

**Figure A3: Mediation Model (Model A)**



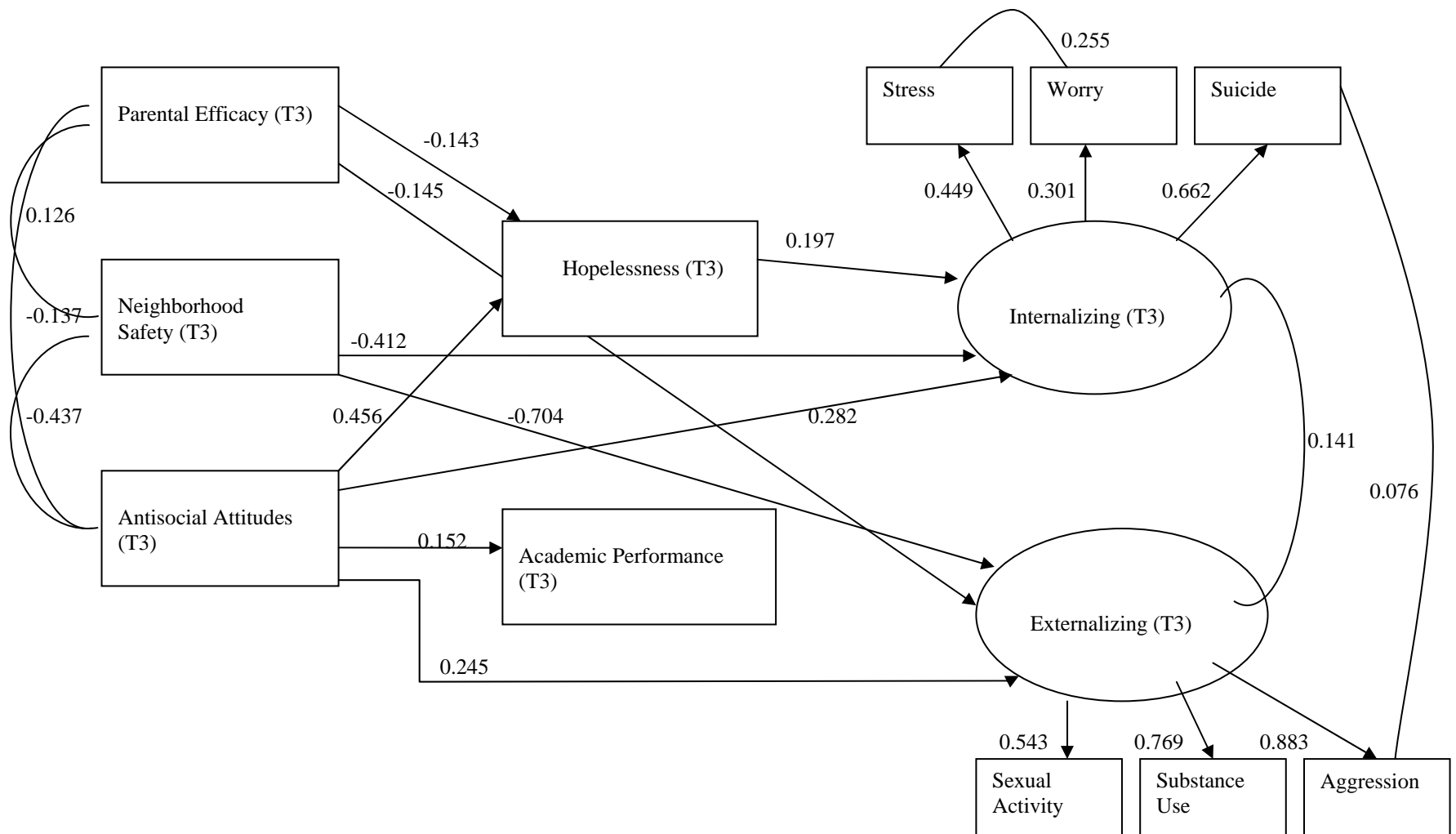


**Figure A4: Mediation Model with Control Variables (Model A)**



M/F: Chi-Square: 41.825 (26;p=0.0256)/53.542 (26;p=0.0012) RMSEA: 0.060/0.078 SRMR: 0.049/0.067 CFI: 0.947/ 0.922  
 Variance(M/F): Hopelessness = 0.161/0.223 Internalizing = 0.056/0.093 Externalizing = 0.032/0.097  
 Significant paths shown; female estimates on top, males estimates on bottom

**Figure A5: Mediation Model (by Gender; Model A)**



Chi-Square: 94.770 (26;  $p=0.0000$ ) RMSEA: 0.088 SRMR: 0.045 CFI: 0.932  
 Variance: Hopelessness = 0.250, Internalizing = 0.505, Externalizing = 0.737  
 Significant paths shown

**Figure A6: Concurrent Mediation Model (ModelA)**

## **APPENDIX B**

### **PRIMARY TABLES**

**Table B1: Time 1 Scalar Properties, Reliabilities, and Descriptive Statistics (9-12 Year Olds)**

Latent Construct Scale (number items, alpha)	Groups							
	Sample				Non-Sample			
	Skew	Kurtosis	M	SD	Skew	Kurtosis	M	SD
Neighborhood Safety (8,.70)	-1.442	2.224	6.59	1.580	-1.234	1.111	6.57	1.573
Parental Efficacy (21,.79)	-.952	.469	16.30	3.697	-.874	-.059	13.07	3.442
Antisocial Attitudes (17,.64)	.353	-.303	5.40	2.845	.226	-.742	4.92	2.587
Academic Performance	.621	-.305	33.397	19.871	.620	-.523	18.64	26.174
Hopelessness (6,.73)	.667	-.646	1.81	1.759	.602	-.398	2.60	1.357
Religiosity (3,.39)	-.716	.597	4.51	1.189	-.499	-.197	4.47	1.189
Extracurriculars (4,.44)	.416	-.116	4.83	2.075	.535	.180	4.80	2.080
Affiliation with Prosocial Peers (11,.61)	.682	.387	13.05	4.012	.364	-.553	13.77	4.466
<b>Internalizing</b>								
Worry (9,.70)	.076	-.719	9.13	3.993	.185	-.565	8.69	3.724
Traumatic Stress (9,.70)	-.068	.013	9.10	3.457	-0.66	.134	8.76	3.361
Suicidality *	-	-	-	-	-	-	-	-
<b>Externalizing</b>								
Aggression (28, .88)	1.796	3.405	5.79	4.724	1.546	2.179	5.97	4.795
Sexual Activity (10, .81)	2.030	4.010	7.35	2.311	.554	-.317	3.50	1.746
Substance Use (17, .90)	2.823	8.000	1.55	2.973	1.504	1.169	3.85	3.724

N=340 for sample, except for academic performance; N ranged from 114-338 for non-sample \*Not assessed at this time point

**Table B2: Time 2 Scalar Properties, Reliabilities, and Descriptive Statistics (9-12 Year Olds)**

	Groups							
	Sample				Non-sample			
<b>Latent Construct</b>	Skew	Kurtosis	M	SD	Skew	Kurtosis	M	SD
Scale (number items, alpha)								
Neighborhood Safety (8, .73)	-.920	.326	5.84	1.925	-.779	-.206	6.02	1.817
Parental Efficacy (21, .75)	-.905	.614	16.49	3.167	-.638	-.197	12.50	3.325
Antisocial Attitudes (17, .73)	-.074	-.807	7.42	3.228	.218	-.933	5.95	2.802
Academic Performance	.790	.262	27.9410	17.289	.753	.333	32.42	21.541
Hopelessness (6, .81)	.620	-.948	1.92	1.992	.616	-.295	2.19	1.042
Religiosity (3, .51)	-.352	-.036	4.14	1.129	-.150	-.622	4.15	1.207
Extracurriculars (4, .46)	.415	.532	4.99	1.892	-.035	-.352	5.07	1.776
Affiliation with Prosocial Peers (11, .70)	.448	-.110	13.82	3.507	.507	.109	13.33	3.688
<b>Internalizing</b>								
Worry (9, .81)	.448	-.448	7.16	3.903	.213	-.482	6.77	3.139
Traumatic Stress (9, .73)	.071	-.206	7.76	2.890	.050	-.271	7.96	3.003
Suicidality (3, .58)	1.233	.507	.65	.900	1.65	1.901	.44	.750
<b>Externalizing</b>								
Aggression (28, .90)	.869	-.037	7.74	6.043	.892	.127	8.28	5.44
Sexual Activity (10, .81)	.478	-1.158	2.39	2.447	.238	-.328	3.81	1.658
Substance Use (17, .92)	.878	-.457	4.35	4.632	.537	-.995	6.01	4.183

N=340 for sample, except for academic performance; N for non-sample ranged from 88-218

**Table B3: Time 3 Scalar Properties, Reliabilities, and Descriptive Statistics (9-12 Year Olds)**

	Groups							
	Sample				Non-Sample			
<b>Latent Construct</b>	Skew	Kurtosis	M	SD	Skew	Kurtosis	M	SD
Scale (number items, alpha)								
Neighborhood Safety (5, .74)	-1.041	.119	6.04	2.152	-1.258	1.301	6.88	1.272
Parental Efficacy (12,.85)	-.758	.369	15.33	3.560	-.768	-.076	13.00	4.482
Antisocial Attitudes (12, .75)	.225	-.801	6.42	3.392	.242	-.421	5.73	2.585
Academic Performance	1.239	1.071	22.86	16.366	.639	.854	26.72	16.573
Hopelessness (6, .83)	.858	-.555	1.64	1.951	.675	-.356	2.70	1.573
Religiosity (3, .62)	-.290	-.195	3.89	1.335	.104	-1.386	3.93	1.619
Extracurriculars (4, .49)	.209	-.012	4.99	2.078	.089	-1.278	4.54	2.26
Affiliation with Prosocial Peers (6, .73)	.703	-.106	13.70	3.837	.725	-.586	13.67	4.31
<b>Internalizing</b>								
Worry (9, .78)	.735	.286	5.57	3.472	.345	.135	6.50	2.997
Traumatic Stress (9, .78)	-.050	.104	6.58	3.083	-.254	-.038	7.28	2.472
Suicidality	1.400	1.023	.55	.834	1.893	3.289	.46	.797
<b>Externalizing</b>								
Aggression (28,.89)	.968	.105	8.51	6.197	.909	.512	6.67	4.057
Sexual Activity (10,.80)	-.095	-1.320	3.51	2.611	.192	-.511	4.30	1.893
Substance Use (17,.94)	.733	-.864	4.87	5.133	.850	-.703	6.03	4.971

N=340 for sample, except for academic performance; N for non-sample ranged from 31-5

**Table B4: Means Across Gender**

	Time 1					Time 2					Time 3				
	N	Mean	SD	F	p	N	Mean	SD	F	P	N	Mean	SD	F	p
Neigh Safety	167 173	6.27 6.91	1.801 1.259	14.762	<b>.000</b>	167 173	5.51 6.15	2.129 1.652	9.535	<b>.002</b>	167 173	5.56 6.51	2.298 1.895	17.044	<b>.000</b>
Parental Efficacy	167 173	15.82 16.76	3.829 3.514	5.512	<b>.019</b>	167 173	15.97 16.98	3.028 3.228	8.719	<b>.003</b>	167 173	14.96 15.70	3.419 3.664	3.750	.054
Hopeless	167 173	1.82 1.81	1.788 1.736	.007	.935	167 173	2.23 1.62	2.023 1.921	8.155	<b>.005</b>	167 173	2.09 1.21	1.936 1.873	17.877	<b>.000</b>
Suicide	NA NA	NA NA	NA NA	NA	NA	167 173	.65 .65	.937 .866	.002	.968	167 173	0.51 .59	0.798 .868	.857	.355
Worry	167 173	9.11 9.15	4.158 3.839	.009	.927	167 173	7.162 7.161	3.909 3.907	.000	.998	167 173	5.286 5.851	3.135 3.758	2.255	.134
Stress	167 173	9.01 9.19	3.632 3.287	.215	.643	167 173	7.892 7.650	2.870 2.913	.592	.442	167 173	6.844 6.335	3.093 3.062	2.320	.129
Aggression	167 173	6.68 4.93	4.926 4.365	11.972	<b>.001</b>	167 173	8.82 6.69	6.337 5.564	10.885	<b>.001</b>	167 173	9.73 7.33	6.275 5.904	13.210	<b>.000</b>
Substance Use	167 173	1.66 1.45	2.939 3.010	.416	.519	167 173	4.83 3.89	4.963 4.253	3.526	.061	167 173	5.69 4.07	5.388 4.755	8.670	<b>.003</b>
Sexual Activity	167 173	7.99 6.73	2.739 1.581	27.249	<b>.000</b>	167 173	3.29 1.53	2.367 2.203	50.779	<b>.000</b>	167 173	4.11 2.93	2.390 2.690	18.344	<b>.000</b>
Religion	167 173	4.36 4.65	1.301 1.055	4.982	<b>.026</b>	167 173	4.023 4.257	1.157 1.092	3.661	.057	167 173	3.634 4.150	1.367 1.255	13.141	<b>.000</b>
Extracur	167 173	5.04 4.62	2.052 2.082	3.543	.061	167 173	5.137 4.858	2.039 1.735	1.851	.175	167 173	5.102 4.898	2.025 2.129	.813	.368
Peers	167 173	12.57 13.51	3.880 4.094	4.708	<b>.031</b>	167 173	12.772 14.843	3.123 3.565	32.381	<b>.000</b>	167 173	12.691 14.680	3.259 4.100	24.409	<b>.000</b>
Antisocial Attitudes	167 173	5.80 5.03	2.870 2.776	6.283	<b>.013</b>	167 173	7.99 6.87	3.197 3.172	10.452	<b>.001</b>	167 173	7.53 5.35	3.229 3.206	38.938	<b>.000</b>
Academic Performance	111 143	32.590 34.024	18.696 20.781	.325	.569	127 161	25.612 29.778	16.001 18.079	4.167	<b>.042</b>	39 37	19.852 26.047	14.163 18.058	2.785	.099

Note: Males top figures, females bottom figures; p<.050 in bold



**Table B5: T1 Gender Correlations**

		Neigh Safety	Parental Efficacy	Hopeless	Worry	Stress	Aggression	Substance Use	Sexual Activity	Religion	Extracur	Peers	Antisocial Attitudes	Academic Performance
Neigh Safety	Correlation	1	.171*	-.264**	.014	-.098	-.616**	-.591**	-.501**	.060	.033	.209**	-.347**	.236*
	N	173	167	167	167	167	167	167	167	167	167	167	167	111
Parental Efficacy	Correlation	.128	1	-.116	.108	.050	-.193*	-.202**	-.256**	.245**	.121	.010	-.176*	.000
	N	173	173	167	167	167	167	167	167	167	167	167	167	111
Hopeless	Correlation	-.050	-.059	1	.150	.218**	.267**	.205**	.155*	.005	.104	-.216**	.319**	-.233*
	N	173	173	173	167	167	167	167	167	167	167	167	167	111
Worry	Correlation	.012	.118	.163*	1	.381**	.000	-.016	.096	.045	.039	-.234**	.098	-.278**
	N	173	173	173	173	167	167	167	167	167	167	167	167	111
Stress	Correlation	-.090	-.163*	.338**	.289**	1	-.012	.035	.051	.115	.173*	-.124	.015	-.242*
	N	173	173	173	173	173	167	167	167	167	167	167	167	111
Aggression	Correlation	-.522**	-.202**	.112	-.139	.077	1	.670**	.633**	-.194*	.029	-.229**	.444**	-.100
	N	173	173	173	173	173	173	167	167	167	167	167	167	111
Substance Use	Correlation	-.362**	-.198**	.086	-.044	.088	.642**	1	.445**	-.193*	-.005	-.094	.294**	-.138
	N	173	173	173	173	173	173	173	167	167	167	167	167	111
Sexual Activity	Correlation	-.328**	-.223**	.182*	.011	.023	.487**	.485**	1	-.096	.056	-.273**	.429**	-.122
	N	173	173	173	173	173	173	173	173	167	167	167	167	111
Religion	Correlation	-.001	.102	-.043	.091	.089	-.179*	-.068	.071	1	.143	.067	-.234**	-.042
	N	173	173	173	173	173	173	173	173	173	167	167	167	111
Extracur	Correlation	-.163*	-.213**	.046	-.114	.057	.221**	.083	.170*	.091	1	.010	-.118	-.045
	N	173	173	173	173	173	173	173	173	173	173	167	167	111
Peers	Correlation	.158*	.107	-.138	-.094	-.168*	-.145	-.175*	-.215**	.048	-.046	1	-.316**	.363**
	N	173	173	173	173	173	173	173	173	173	173	173	167	111
Antisocial Attitudes	Correlation	-.198**	-.244**	.191*	-.004	.113	.496**	.466**	.178*	-.182*	.254**	-.099	1	-.128
	N	173	173	173	173	173	173	173	173	173	173	173	173	111
Academic Performance	Correlation	.157	-.009	-.406**	-.140	-.265**	-.109	.124	-.185*	-.032	-.143	.189*	-.078	1
	N	143	143	143	143	143	143	143	143	143	143	143	143	143

Note: \*p<.05; \*\*p<.01; Females below diagonal, males above diagonal

**Table B6: T2 Gender Correlations**

		Neigh Safety	Parental Efficacy	Hopeless	Suicide	Worry	Stress	Aggression	Substance Use	Sexual Activity	Religion	Extracur	Peers	Antisocial Attitudes	Academics
Neigh Safety	Correlation	1	.204**	-.172*	-.435**	-.047	-.123	-.750**	-.612**	-.479**	.016	-.069	.079	-.496**	.185*
	N	173	167	167	167	167	167	167	167	167	167	167	167	167	127
Parental Efficacy	Correlation	.132	1	-.147	-.031	-.095	-.052	-.319**	-.248**	-.271**	.174*	.017	.211**	-.207**	.137
	N	173	173	167	167	167	167	167	167	167	167	167	167	167	127
Hopeless	Correlation	-.120	-.116	1	.155*	.255**	.238**	.222**	.057	.011	-.133	-.062	-.237**	.345**	-.295**
	N	173	173	173	167	167	167	167	167	167	167	167	167	167	127
Suicide	Correlation	-.379**	-.018	.137	1	.093	.201**	.463**	.291**	.270**	-.069	.015	-.089	.263**	-.126
	N	173	173	173	173	167	167	167	167	167	167	167	167	167	127
Worry	Correlation	-.027	.140	.305**	.190*	1	.390**	.015	-.054	-.029	.094	-.046	-.163*	.078	-.291**
	N	173	173	173	173	173	167	167	167	167	167	167	167	167	127
Stress	Correlation	-.103	.004	.173*	.273**	.370**	1	.167*	-.009	.025	.142	.105	-.141	.190*	-.152
	N	173	173	173	173	173	173	167	167	167	167	167	167	167	127
Aggression	Correlation	-.632**	-.225**	.110	.403**	-.015	.153*	1	.647**	.534**	-.080	.069	-.183*	.538**	-.219*
	N	173	173	173	173	173	173	173	167	167	167	167	167	167	127
Substance Use	Correlation	-.410**	-.192*	-.004	.342**	-.117	.066	.716**	1	.535**	-.042	-.020	-.105	.390**	-.129
	N	173	173	173	173	173	173	173	173	167	167	167	167	167	127
Sexual Activity	Correlation	-.269**	-.170*	.093	.292**	.042	.138	.528**	.568**	1	-.066	.201**	-.097	.314**	-.016
	N	173	173	173	173	173	173	173	173	173	167	167	167	167	127
Religion	Correlation	.184*	.233**	-.097	-.062	.012	.043	-.266**	-.209**	-.093	1	.050	.102	-.187*	.305**
	N	173	173	173	173	173	173	173	173	173	173	167	167	167	127
Extracur	Correlation	-.099	.018	-.147	-.067	.089	.048	.062	.132	-.036	.202**	1	.122	-.041	.136
	N	173	173	173	173	173	173	173	173	173	173	173	167	167	127
Peers	Correlation	.096	.021	-.421**	-.068	-.283**	-.146	-.054	.033	-.155*	.107	.039	1	-.267**	.292**
	N	173	173	173	173	173	173	173	173	173	173	173	173	167	127
Antisocial Attitudes	Correlation	-.407**	-.170*	.368**	.319**	.140	.170*	.564**	.466**	.325**	-.181*	.085	-.220**	1	-.295**
	N	173	173	173	173	173	173	173	173	173	173	173	173	173	127
Academics	Correlation	-.122	-.057	-.354**	.115	-.342**	-.096	.147	.250**	-.082	.007	.205**	.425**	-.006	1
	N	161	161	161	161	161	161	161	161	161	161	161	161	161	161

Note: \*p<.05; \*\*p<.01; Females below diagonal, males above diagonal

**Table B7: T3 Gender Correlations**

		Neigh Safety	Parental Efficacy	Suicide	Hopeless	Worry	Stress	Aggress	Substance Use	Sexual Activity	Religion	Extracur	Peers	Anti Attitudes	Academics
Neigh Safety	Correlation	1	.057	-.448**	-.174*	-.160*	-.207**	-.744**	-.568**	-.388**	.064	-.071	.150	-.389**	.213
	N	173	167	167	167	167	167	167	167	167	167	167	167	167	39
Parental Efficacy	Correlation	.161*	1	-.052	.068	-.146	-.049	-.069	-.191*	-.129	.114	.169*	.170*	.028	-.199
	N	173	173	167	167	167	167	167	167	167	167	167	167	167	39
Suicide	Correlation	-.431**	-.121	1	.301**	.355**	.280**	.524**	.382**	.247**	.009	-.087	-.174*	.322**	-.124
	N	173	173	173	167	167	167	167	167	167	167	167	167	167	39
Hopeless	Correlation	-.346**	-.095	.268**	1	.208**	.143	.212**	.084	-.034	-.053	-.128	-.400**	.424**	-.258
	N	173	173	173	173	167	167	167	167	167	167	167	167	167	39
Worry	Correlation	-.153*	-.014	.166*	.389**	1	.330**	.195*	.089	.065	.101	.034	-.151	.102	-.320*
	N	173	173	173	173	173	167	167	167	167	167	167	167	167	39
Stress	Correlation	-.331**	-.122	.274**	.354**	.460**	1	.243**	.249**	.209**	.133	.072	-.062	.172*	-.127
	N	173	173	173	173	173	173	167	167	167	167	167	167	167	39
Aggressio n	Correlation	-.750**	-.291**	.525**	.283**	.087	.243**	1	.620**	.447**	-.060	.115	-.111	.392**	-.175
	N	173	173	173	173	173	173	173	167	167	167	167	167	167	39
Substance Use	Correlation	-.588**	-.288**	.380**	.273**	.015	.272**	.693**	1	.616**	-.131	-.024	-.185*	.387**	.114
	N	173	173	173	173	173	173	173	173	167	167	167	167	167	39
Sexual Activity	Correlation	-.270**	-.254**	.357**	.016	-.003	.104	.405**	.523**	1	-.180*	.072	-.145	.230**	.086
	N	173	173	173	173	173	173	173	173	173	167	167	167	167	39
Religion	Correlation	.105	.056	-.072	-.023	-.045	-.007	-.118	-.161*	-.194*	1	.026	.100	-.180*	.085
	N	173	173	173	173	173	173	173	173	173	173	167	167	167	39
Extracur	Correlation	.096	.024	-.087	.014	-.013	.038	-.059	-.055	-.164*	.203**	1	.208**	-.064	.270
	N	173	173	173	173	173	173	173	173	173	173	173	167	167	39
Peers	Correlation	.176*	.121	-.190*	-.351**	-.220**	-.176*	-.243**	-.253**	-.140	.201**	.199**	1	-.278**	.343*
	N	173	173	173	173	173	173	173	173	173	173	173	173	167	39
Antisocial Attitudes	Correlation	-.408**	-.235**	.496**	.488**	.212**	.312**	.516**	.438**	.238**	-.189*	-.089	-.244**	1	-.412**
	N	173	173	173	173	173	173	173	173	173	173	173	173	173	39
Academics	Correlation	.116	-.044	.014	-.111	-.322	-.199	.108	.086	.043	.079	.219	-.132	.124	1
	N	37	37	37	37	37	37	37	37	37	37	37	37	37	37

Note: \*p<.05; \*\*p<.01; Females below diagonal, males above diagonal

**Table B8: T1 Mean Comparisons for Low vs. High Hopelessness**

	N	Mean	SD	F	Sig.	Welch's t	Sig.
Neighborhood Safety	277 63	6.65 6.33	1.542 1.729	2.106	.148	1.823	.180
Parental Efficacy	277 63	16.35 16.07	3.582 4.189	.299	.585	.246	.621
Worry	277 63	9.01 9.68	4.046 3.733	1.447	.230	1.601	.209
Stress	277 63	8.82 10.35	3.489 3.036	10.309	.001	12.281	.001
Aggression	277 63	5.79 7.11	4.476 5.533	6.161	.014	4.726	.033
Substances	277 63	1.45 2.02	2.776 3.707	1.901	.169	1.327	.253
Sex	277 63	7.23 7.90	2.264 2.451	4.345	.038	3.932	.051
Religion	277 63	4.53 4.41	1.185 1.213	.482	.488	.468	.496
Extracur	277 63	4.83 4.82	2.055 2.179	.000	.988	.000	.988
Peers	277 63	13.23 12.28	4.168 3.154	2.899	.090	4.098	.045
Antisocial Attitudes	277 63	5.18 6.41	2.741 3.090	9.889	.002	8.500	.005
Academic Performance	222 32	34.405 26.406	20.0905 16.9579	4.596	.033	5.922	.019

Note: Low hopelessness top figures, high hopelessness bottom figures

**Table B9: T2 Mean Comparisons for Low vs. High Hopelessness**

	N	Mean	SD	F	Sig.	Welch's t	Sig.
Neighborhood Safety	254 86	6.00 5.36	1.790 2.222	7.183	.008	5.809	.017
Parental Efficacy	254 86	16.72 15.79	3.023 3.483	5.632	.018	4.898	.029
Suicide	254 86	.60 .81	.860 .998	3.667	.056	3.166	.078
Worry	254 86	6.72 8.48	4.026 3.187	13.593	.000	17.085	.000
Stress	254 86	7.46 8.67	2.888 2.721	11.485	.001	12.183	.001
Aggression	254 86	7.20 9.31	5.718 6.705	7.999	.005	6.837	.010
Substances	254 86	4.24 4.70	4.470 5.094	.634	.426	.557	.457
Sex	254 86	2.28 2.73	2.339 2.729	2.113	.147	1.815	.180
Religion	254 86	4.22 3.92	1.072 1.263	4.591	.033	3.908	.050
Extracur	254 86	5.06 4.81	1.853 2.005	1.127	.289	1.043	.309
Peers	254 86	14.44 12.01	3.612 2.403	33.799	.000	49.789	.000
Antisocial Attitudes	254 86	6.82 9.17	3.108 2.941	37.619	.000	39.737	.000
Acadavg	227 61	30.095 19.926	17.582 13.515	17.592	.000	23.736	.000

Note: Low hopelessness top figures, high hopelessness bottom figures

**Table B10: T3 Mean Comparisons for Low vs. High Hopelessness**

	N	Mean	SD	F	Sig.	Welch's t	Sig.
Neighborhood Safety	272 68	6.23 5.29	1.952 2.698	10.831	.001	7.398	.008
Parental Efficacy	272 68	15.27 15.60	3.694 2.971	.479	.489	.621	.432
Suicide	272 68	.48 .85	.738 1.096	11.434	.001	7.209	.009
Worry	272 68	5.22 6.98	3.307 3.777	14.566	.000	12.422	.001
Stress	272 68	6.32 7.63	2.909 3.534	10.061	.002	7.974	.006
Aggression	272 68	7.95 10.74	5.731 7.426	11.388	.001	8.372	.005
Substances	272 68	4.64 5.77	5.048 5.402	2.627	.106	2.421	.123
Sex	272 68	3.53 3.41	2.628 2.559	.114	.736	.117	.733
Religion	272 68	3.91 3.83	1.332 1.354	.201	.654	.197	.658
Extracur	272 68	5.03 4.86	2.016 2.321	.375	.540	.317	.575
Peers	272 68	14.20 11.73	3.953 2.519	24.069	.000	40.457	.000
Antisocial Attitudes	272 68	5.79 8.95	3.150 3.158	54.853	.000	54.676	.000
Acadavg	54 22	24.037 20.000	16.797 15.249	.950	.333	1.032	.315

Note: Low hopelessness top figures, high hopelessness bottom figures

**Table B11: T1 High vs. Low Hopelessness Correlations**

		Neigh Safety	Parental Efficacy	Hopeless	Worry	Stress	Aggression	Substance Use	Sexual Activity	Antisocial Attitudes	Academic Performance
Neighborhood Safety	Correlation	1	.355(**)	-.011	-.047	.191	-.620(**)	-.553(**)	-.522(**)	-.444(**)	-.112
	N	277	63	63	63	63	63	63	63	63	32
Parental Efficacy	Correlation	.119(*)	1	.318(*)	.018	.155	-.319(*)	-.297(*)	-.466(**)	-.255(*)	-.286
	N	277	277	63	63	63	63	63	63	63	32
Hopeless	Correlation	-.206(**)	-.179(**)	1	.027	.311(*)	.001	-.131	-.064	.004	-.282
	N	277	277	277	63	63	63	63	63	63	32
Worry	Correlation	.035	.139(*)	.189(**)	1	.337(**)	.051	-.032	.186	-.086	-.076
	N	277	277	277	277	63	63	63	63	63	32
Stress	Correlation	-.133(*)	-.085	.220(**)	.332(**)	1	-.034	-.098	-.138	-.015	-.350(*)
	N	277	277	277	277	277	63	63	63	63	32
Aggression	Correlation	-.579(**)	-.180(**)	.169(**)	-.105	.008	1	.780(**)	.518(**)	.516(**)	.051
	N	277	277	277	277	277	277	63	63	63	32
Substance Use	Correlation	-.455(**)	-.168(**)	.196(**)	-.037	.086	.599(**)	1	.454(**)	.520(**)	-.040
	N	277	277	277	277	277	277	277	63	63	32
Sexual Activity	Correlation	-.461(**)	-.202(**)	.137(*)	.024	.045	.605(**)	.426(**)	1	.358(**)	.004
	N	277	277	277	277	277	277	277	277	63	32
Antisocial Activities	Correlation	-.250(**)	-.210(**)	.235(**)	.066	.039	.455(**)	.328(**)	.330(**)	1	-.043
	N	277	277	277	277	277	277	277	277	277	32
Academic Performance	Correlation	.233(**)	.036	-.362(**)	-.210(**)	-.232(**)	-.118	.023	-.156(*)	-.092	1
	N	222	222	222	222	222	222	222	222	222	222

Note: \*p<.05; \*\*p<.01; low hopelessness below diagonal, high hopelessness above diagonal

**Table B12: T2 High vs. Low Hopelessness Correlations**

		Neigh Safety	Parental Efficacy	Hopeless	Suicide	Worry	Stress	Aggression	Substance Use	Sexual Activity	Antisocial Attitudes	Academic Performance
Neighborhood Safety	Correlation	1	.214(*)	.139	-.441(**)	.034	.083	-.730(**)	-.715(**)	-.438(**)	-.373(**)	.010
	N	254	86	86	86	86	86	86	86	86	86	61
Parental Efficacy	Correlation	.157(*)	1	-.020	.023	.190	-.043	-.344(**)	-.280(**)	-.283(**)	-.038	-.135
	N	254	254	86	86	86	86	86	86	86	86	61
Hopeless	Correlation	-.163(**)	-.102	1	-.131	.080	.001	-.067	-.099	-.175	.103	-.135
	N	254	254	254	86	86	86	86	86	86	86	61
Suicide	Correlation	-.372(**)	-.026	.176(**)	1	.129	-.025	.503(**)	.466(**)	.328(**)	.239(*)	-.009
	N	254	254	254	254	86	86	86	86	86	86	61
Worry	Correlation	-.023	.014	.234(**)	.124(*)	1	.267(*)	-.026	-.075	-.049	.152	-.196
	N	254	254	254	254	254	86	86	86	86	86	61
Stress	Correlation	-.165(**)	.008	.131(*)	.314(**)	.380(**)	1	-.011	-.085	-.015	-.098	-.246
	N	254	254	254	254	254	254	86	86	86	86	61
Aggression	Correlation	-.689(**)	-.248(**)	.177(**)	.382(**)	-.032	.198(**)	1	.797(**)	.626(**)	.482(**)	-.022
	N	254	254	254	254	254	254	254	86	86	86	61
Substance Use	Correlation	-.451(**)	-.206(**)	.046	.239(**)	-.101	.062	.632(**)	1	.583(**)	.440(**)	.065
	N	254	254	254	254	254	254	254	254	86	86	61
Sexual Activity	Correlation	-.397(**)	-.238(**)	.134(*)	.221(**)	.001	.112	.511(**)	.528(**)	1	.300(**)	-.039
	N	254	254	254	254	254	254	254	254	254	86	61
Antisocial Attitudes	Correlation	-.486(**)	-.233(**)	.234(**)	.280(**)	.023	.206(**)	.577(**)	.446(**)	.370(**)	1	-.109
	N	254	254	254	254	254	254	254	254	254	254	61
Academic Performance	Correlation	.017	.052	-.275(**)	.038	-.304(**)	-.052	-.007	.099	-.078	-.075	1
	N	227	227	227	227	227	227	227	227	227	227	227

Note: \*p<.05; \*\*p<.01; low hopelessness below diagonal, high hopelessness above diagonal



**Table B13: T3 High vs. Low Hopelessness Correlations**

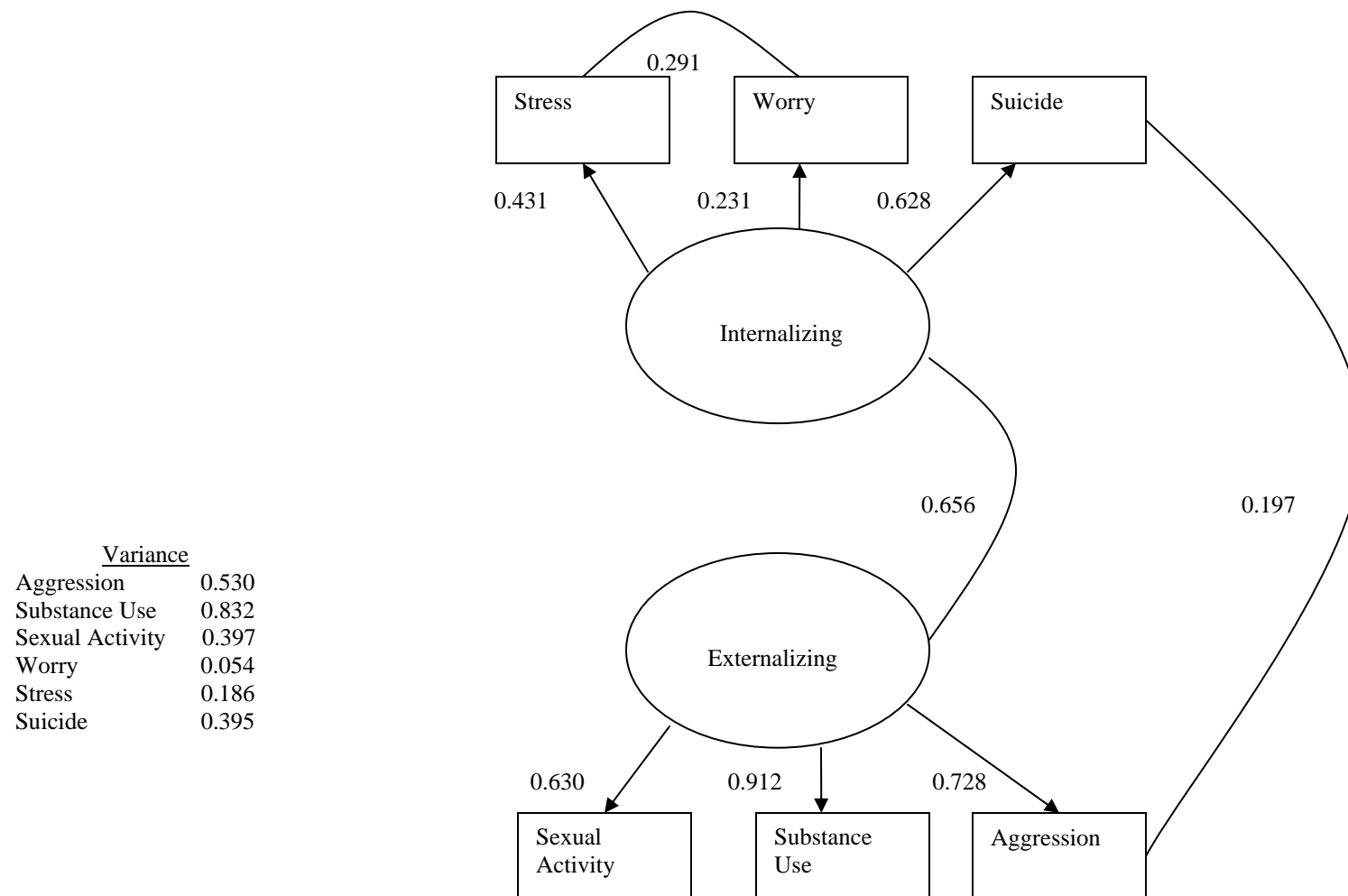
		Neigh Safety	Parental Efficacy	Suicide	Hopeless	Worry	Stress	Aggression	Substance Use	Sexual Activity	Antisocial Attitudes	Academic Performance
Neighborhood Safety	Correlation	1	.123	-.576(**)	.047	-.308(*)	-.248(*)	-.752(**)	-.559(**)	-.390(**)	-.439(**)	.014
	N	272	68	68	68	68	68	68	68	68	68	22
Parental Efficacy	Correlation	.142(*)	1	-.165	-.089	-.223	-.063	-.128	-.310(**)	-.098	-.074	.027
	N	272	272	68	68	68	68	68	68	68	68	22
Suicide	Correlation	-.302(**)	-.075	1	-.007	.263(*)	.294(*)	.704(**)	.403(**)	.435(**)	.318(**)	.279
	N	272	272	272	68	68	68	68	68	68	68	22
Hopeless	Correlation	-.343(**)	-.129(*)	.276(**)	1	.309(*)	-.069	.007	-.056	-.110	.088	-.203
	N	272	272	272	272	68	68	68	68	68	68	22
Worry	Correlation	-.019	-.037	.204(**)	.179(**)	1	.522(**)	.192	.221	.294(*)	.040	-.090
	N	272	272	272	272	272	68	68	68	68	68	22
Stress	Correlation	-.253(**)	-.115	.229(**)	.282(**)	.316(**)	1	.192	.270(*)	.412(**)	-.028	-.045
	N	272	272	272	272	272	272	68	68	68	68	22
Aggression	Correlation	-.746(**)	-.234(**)	.383(**)	.295(**)	.043	.245(**)	1	.585(**)	.520(**)	.499(**)	.149
	N	272	272	272	272	272	272	272	68	68	68	22
Substance Use	Correlation	-.601(**)	-.244(**)	.344(**)	.287(**)	-.042	.255(**)	.690(**)	1	.469(**)	.253(*)	.431(*)
	N	272	272	272	272	272	272	272	272	68	68	22
Sexual Activity	Correlation	-.367(**)	-.239(**)	.255(**)	.143(*)	-.068	.103	.445(**)	.612(**)	1	.223	.251
	N	272	272	272	272	272	272	272	272	272	68	22
Antisocial Attitudes	Correlation	-.400(**)	-.181(**)	.351(**)	.403(**)	.060	.283(**)	.445(**)	.484(**)	.342(**)	1	.116
	N	272	272	272	272	272	272	272	272	272	272	22
Academic Performance	Correlation	.219	-.087	-.155	-.166	-.330(*)	-.190	-.066	-.017	-.059	-.130	1
	N	54	54	54	54	54	54	54	54	54	54	54

Note: \*p<.05; \*\*p<.01; low hopelessness below diagonal, high hopelessness above diagonal

## **APPENDIX C**

### **SUPPLEMENTARY FIGURES AND TABLES**

Figures were constructed for various alternative models referenced throughout the text (i.e., Models B and C and measurement model). These figures may assist readers with clarification of the distinctions in each of the models presented. In addition to the tables generated for the main results, tables were also constructed for preliminary analyses completed, as well as for secondary findings from the current study.



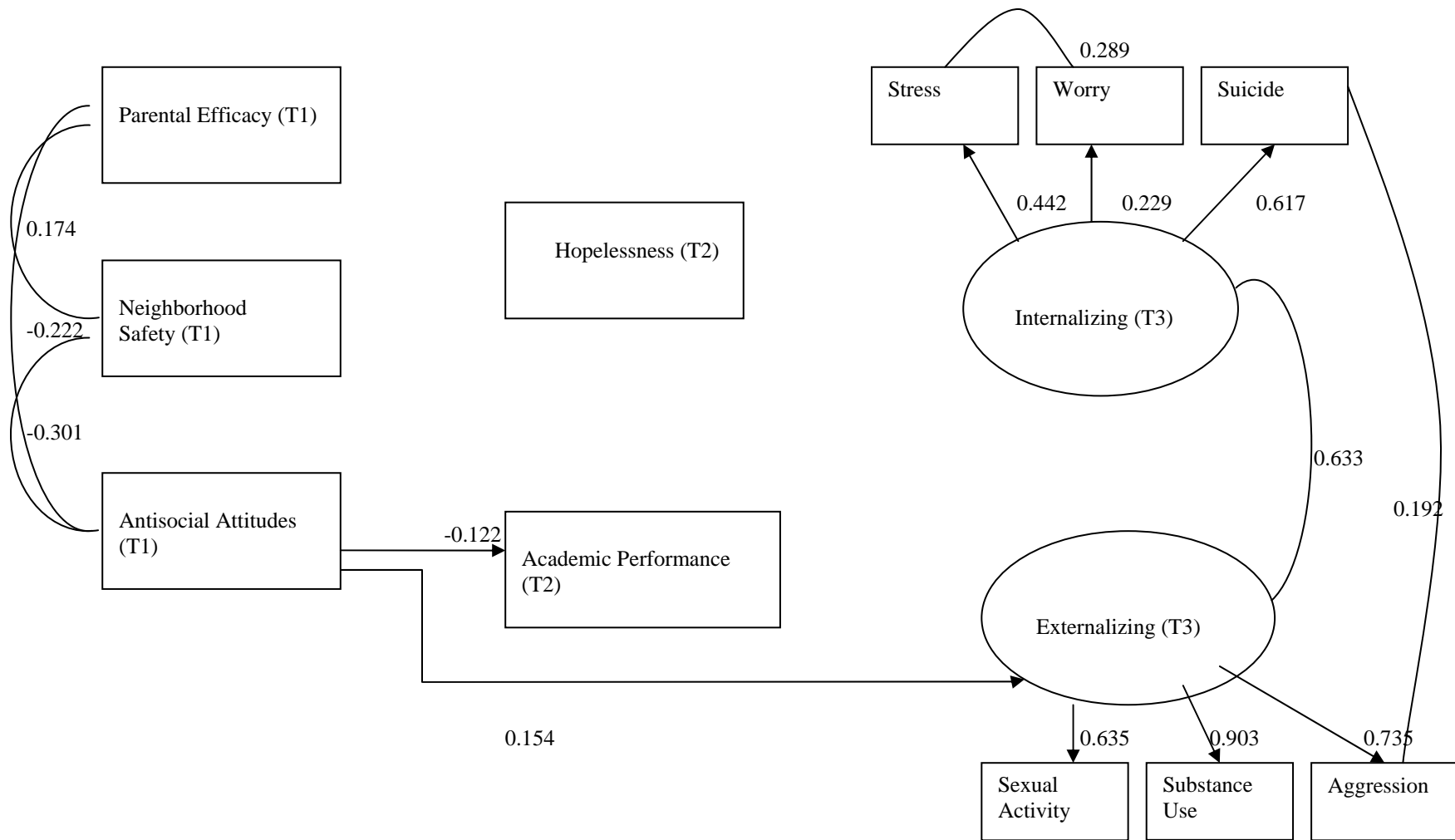
Chi-Square: 18.490(df=6;p=0.0000)

RMSEA: 0.078 SRMR: 0.040

CFI: 0.977

\*All paths significant at  $p < 0.05$

**Figure C1: Measurement Model**



Chi-Square: 158.142 (32;p=0.0000)

RMSEA: 0.108

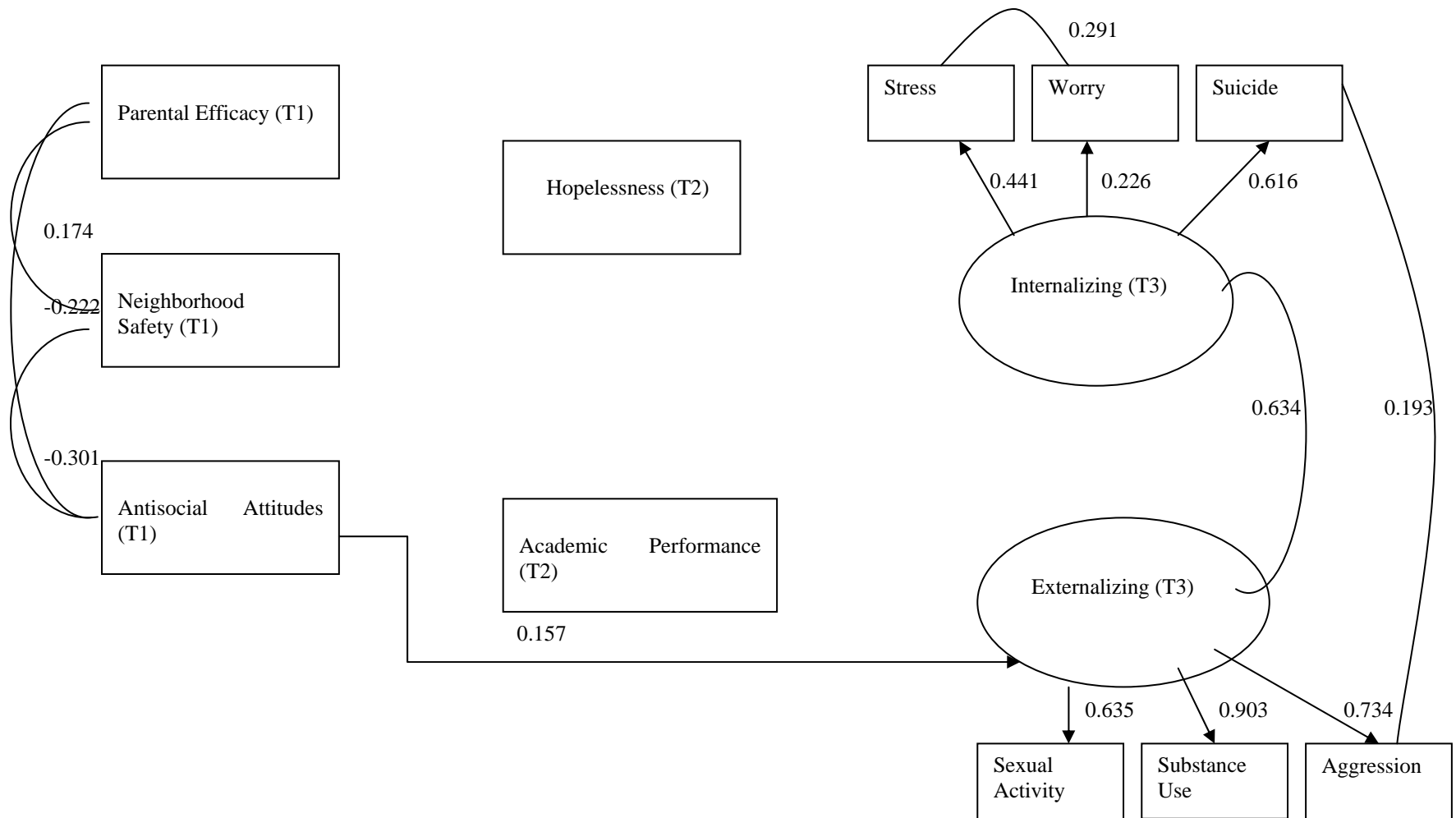
SRMR: 0.087

CFI: 0.811

Variance: Hopelessness = NA, Internalizing = 0.029, Externalizing = 0.045

Significant paths shown

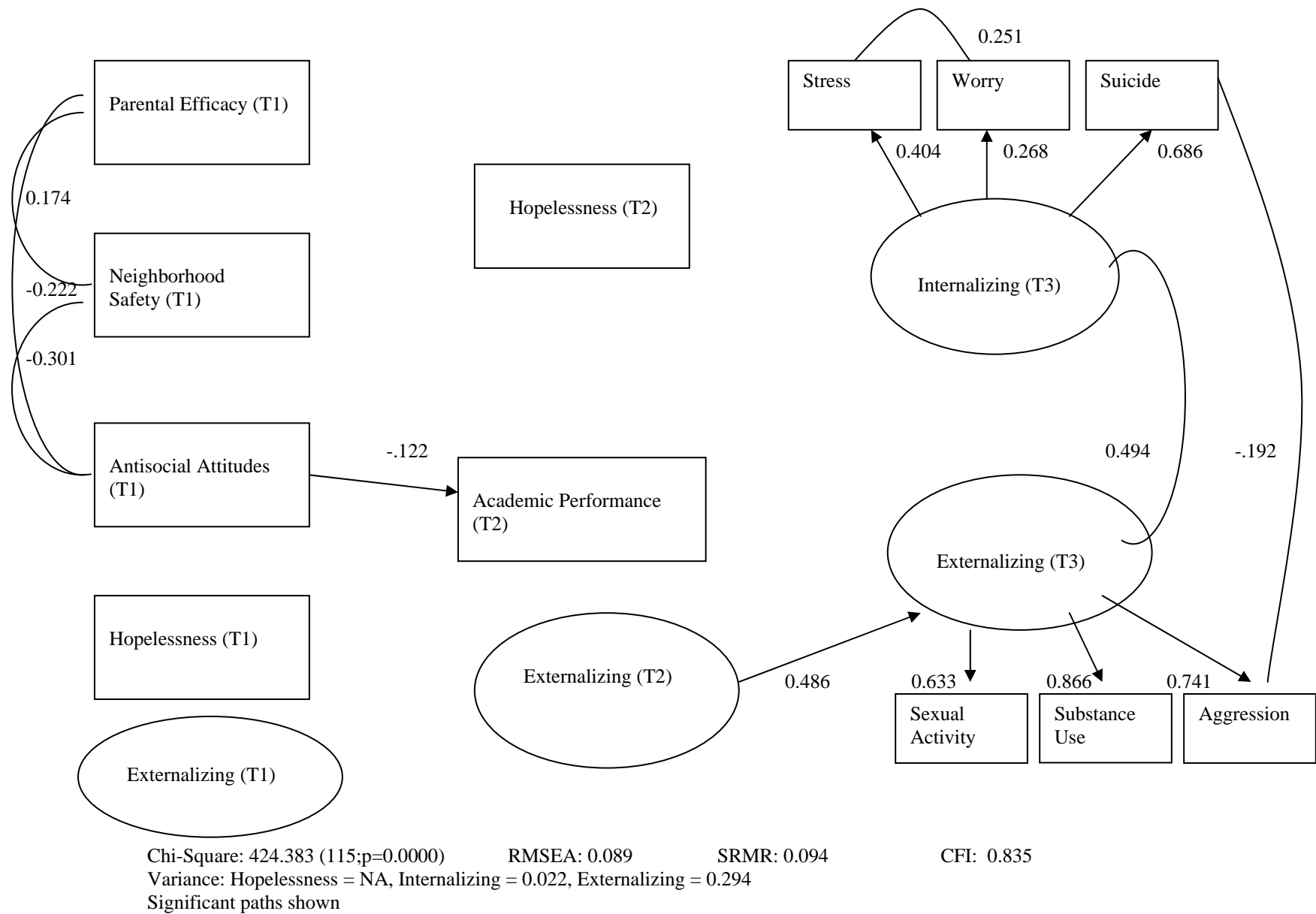
**Figure C2: No Mediation via Hopelessness (Model B)**



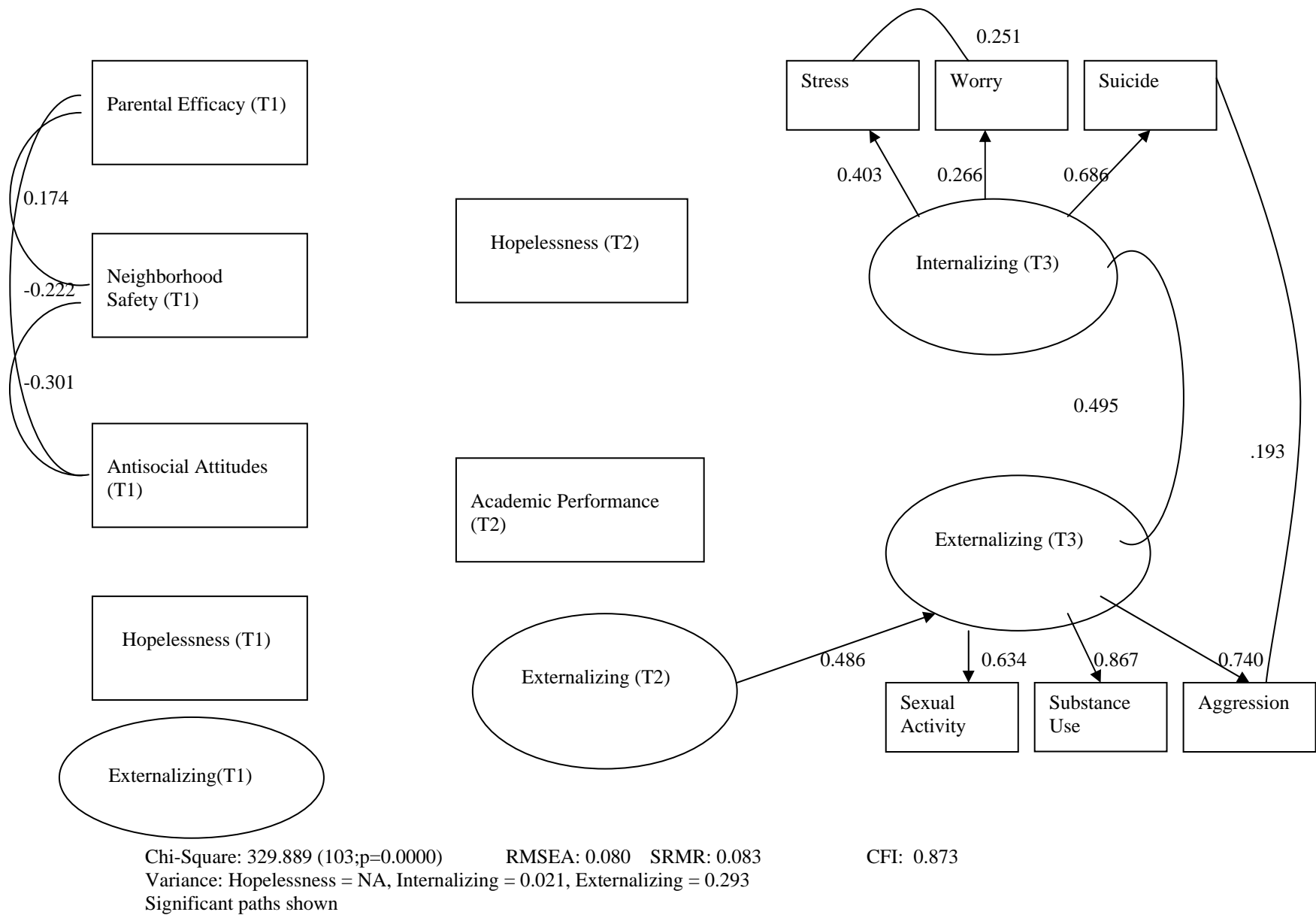
Chi-Square: 170.634 (37;p=0.0000) RMSEA: 0.103 SRMR: 0.092  
 Variance: Hopelessness = NA, Internalizing = 0.029, Externalizing = 0.045  
 Significant paths shown

CFI: 0.799

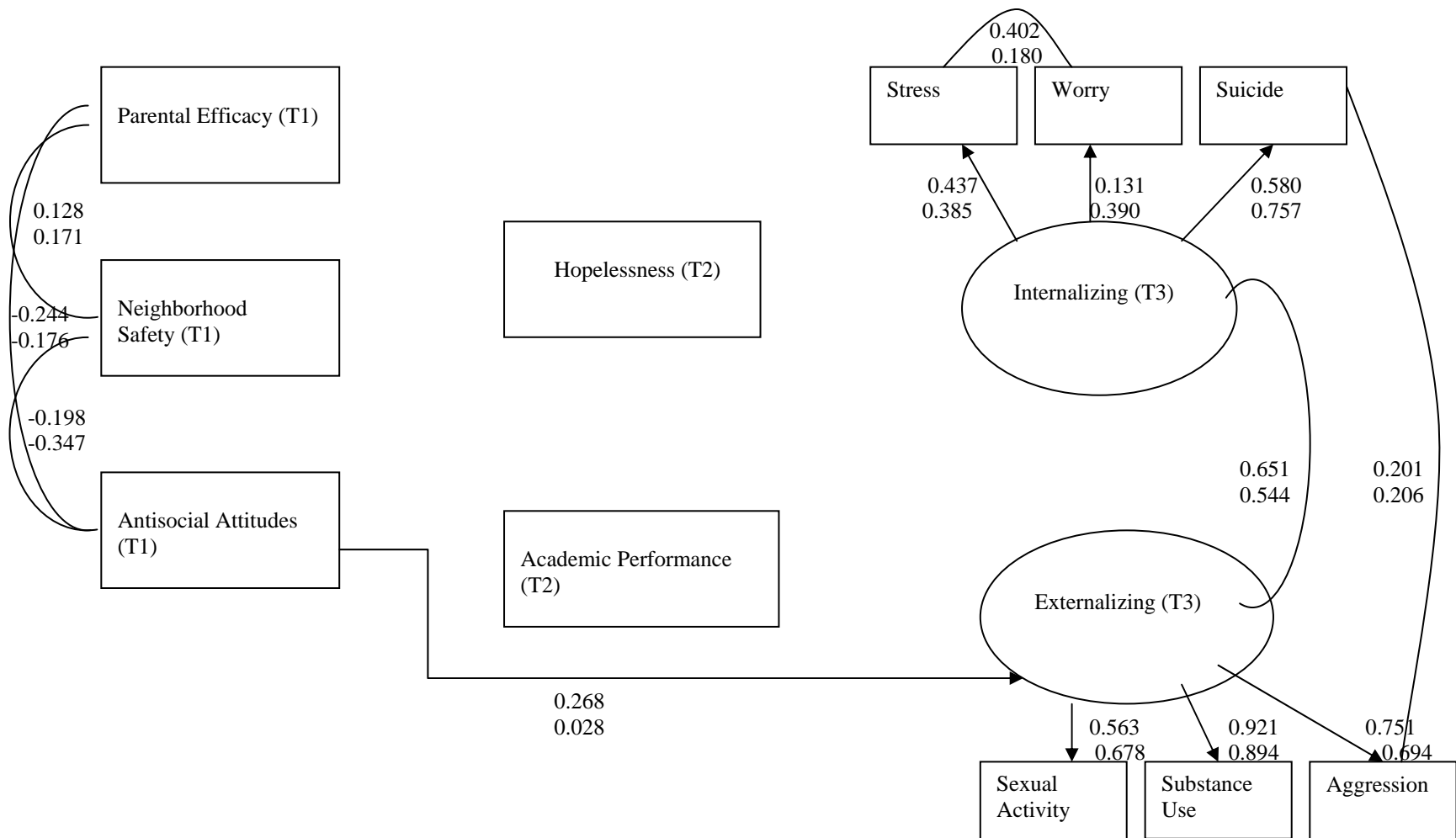
**Figure C3: No Mediation Model (Model C)**



**Figure C4: No Mediation via Hopelessness with Control Variables (Model B)**



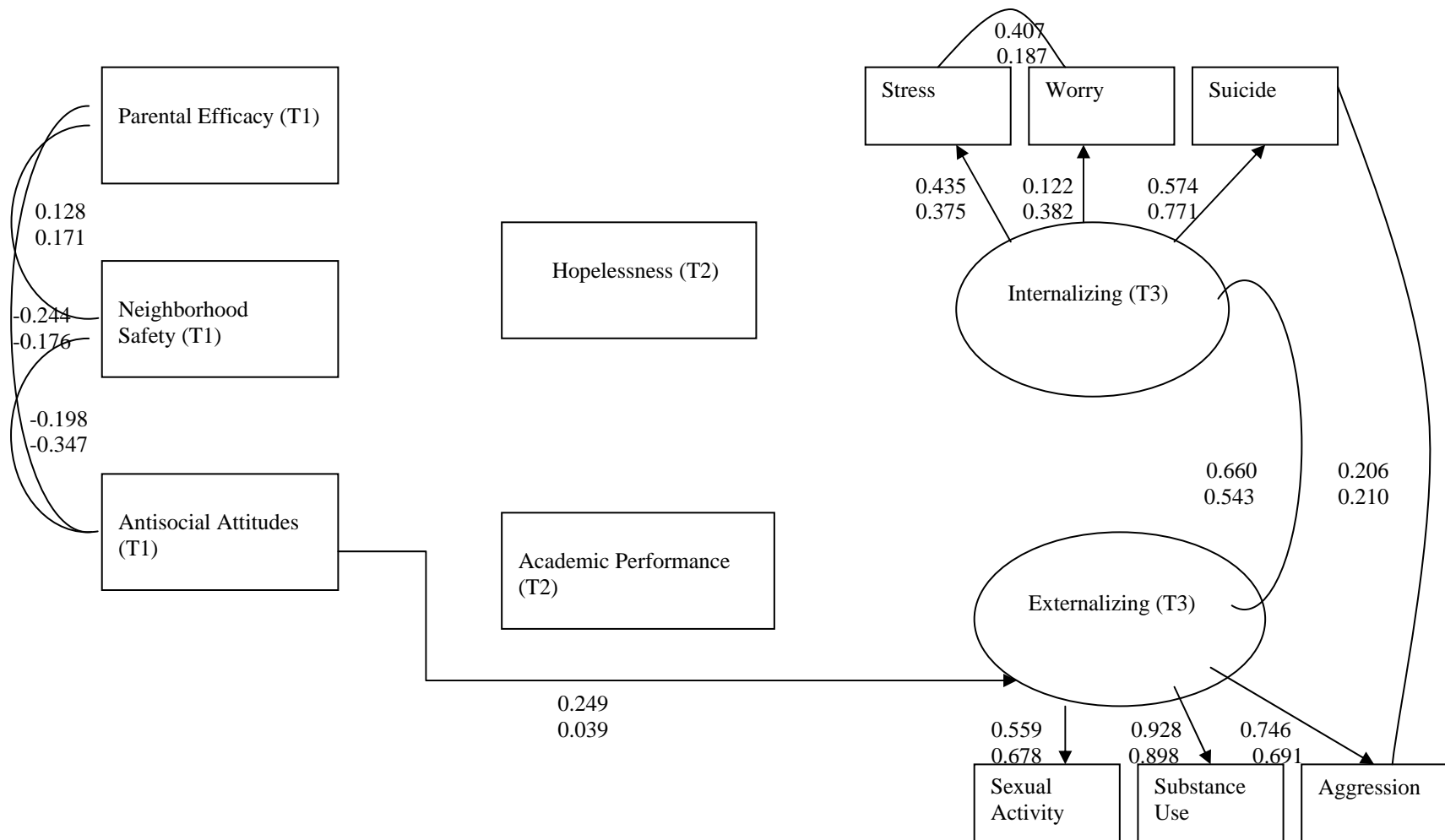
**Figure C5: No Mediation Model with Control Variables (Model C)**



M/F: Chi-Square: 80.485 (32;p=0.0000)/ 98.792 (32;p=0.0000) RMSEA: 0.095/ RMSEA: 0.110 SRMR: 0.083/0.096 CFI: 0.837/0.810  
 Variance(M/F): Hopelessness = NA/NA Internalizing = 0.018/0.071 Externalizing = 0.021/0.097  
 Significant paths shown

**Figure C6: No Mediation via Hopelessness Model (by Gender; Model B)**





M/F: Chi-Square: 86.551 (37;p=0.0000)/ 104.900 (37;p=0.0000) RMSEA: 0.090 RMSEA: 0.103 SRMR: 0.090/0.099 CFI: 0.834/0.807  
 Variance(M/F): Hopelessness = NA/NA Internalizing = 0.012/0.067 Externalizing = 0.010/0.078  
 Significant paths shown

**Figure C7: No Mediation Model (by Gender; Model C)**

**Table C1: Mobile Youth Survey Multiple Cohort Design**

			Data points					
	N	New Cohort	Six	Five	Four	Three	Two	One
1998	1775	1775	236	223	268	271	373	404
1999	2465	1221		210	180	180	220	431
2000	2196	624			145	111	114	254
2001	2462	878				277	193	408
2002	2265	713					284	429
2003	2285	684						684
Total	13448	5895	236	433	593	839	1184	2610

From Bolland, Lian, and Formichella (2005)

**Table C2: Demographic Characteristics of Cohorts Reported at the Time of Enrollment**

	Cohort					
	1998	1999	2000	2001	2002	2003
Mean Age	13.56	13.19	12.64	12.77	12.61	12.57
Percent Male	51.1	53.3	52.4	49.4	50.9	52.7
Percent African American	94.1	92.0	91.6	92.0	89.0	91.6
Percent living in public housing	62.3	57.2	55.3	44.8	50.2	50.4
Percent receiving free or reduced cost lunch	93.0	91.5	92.3	90.6	87.3	91.6

From Bolland, Lian, and Formichella (2005)

**Table C3: Number of Waves of Participation**

No. of Waves	Age Group		
	9-12 years (% male, female)	13-15 years (% male, female)	16-19 years (% male, female)
1	1074	676	905
2	636	324	346
3	466	251	135
4	422	253	21
5	272	153	3
6	265	84	2
7	122	2	0
Total	3257 (51.3, 48.7)	1743 (52.1, 47.9)	1412 (53.0, 47.0)

**Table C4: Across Time Correlations for Measures**

	T1, T2	T2,T3	T1,T3
Neighborhood Safety	.316**	.462**	.226**
Parental Efficacy	.215**	.352**	.114
Antisocial Attitudes	.325**	.389**	.224**
Academic Performance	.681**	.677**	.647**
Hopelessness	.369**	.328**	.131*
Worry	.372**	.406**	.163**
Suicidality	na	.283**	na
Traumatic Stress	.296**	.325**	.135*
Substance Use	.233**	.434**	.186**
Sexual Activity	.271**	.415**	.123*
Aggression	.312**	.445**	.253**
Religiosity	.285**	.388**	.104
Extracurriculars	.144*	.284**	.146**
Affiliation with Prosocial Peers	.280**	.366**	.215**

N=340, except for academic performance; \*  $p < .05$ ; \*\* $p < .01$ ; na = not assessed at T1

**Table C5: T1 Bivariate Correlations**

		Neigh. Safety	Parental Efficacy	Hopeless	Worry	Stress	Aggression	Substance Use	Sexual Activity	Antisocial Attitudes	Academic Performance
Neighborhood Safety	Correlation	1	.205(**)	-.059	-.170(**)	-.189(**)	-.632(**)	-.529(**)	-.261(**)	-.298(**)	.187(**)
	N	340	338	232	335	332	338	148	114	325	225
Parental Efficacy	Correlation	.174(**)	1	-.051	.049	.084	-.315(**)	-.322(**)	-.193(*)	-.247(**)	.096
	N	340	340	232	335	332	338	148	114	325	225
Hopeless	Correlation	-.170(**)	-.089	1	.147(*)	.057	.073	.156	-.026	.249(**)	-.279(**)
	N	340	340	340	232	230	232	100	87	229	142
Worry	Correlation	.014	.112(*)	.156(**)	1	.315(**)	.144(**)	.132	.074	.045	-.215(**)
	N	340	340	340	340	329	335	147	114	323	224
Stress	Correlation	-.087	-.045	.275(**)	.338(**)	1	.187(**)	.091	.033	.129(*)	-.119
	N	340	340	340	340	340	332	146	111	320	221
Aggression	Correlation	-.591(**)	-.216(**)	.191(**)	-.063	.023	1	.675(**)	.426(**)	.493(**)	-.094
	N	340	340	340	340	340	340	148	114	325	225
Substance Use	Correlation	-.482(**)	-.202(**)	.145(**)	-.030	.060	.650(**)	1	.439(**)	.346(**)	-.091
	N	340	340	340	340	340	340	340	82	147	103
Sexual Activity	Correlation	-.478(**)	-.262(**)	.155(**)	.060	.032	.590(**)	.435(**)	1	.309(**)	.146
	N	340	340	340	340	340	340	340	340	113	74
Antisocial Attitudes	Correlation	-.301(**)	-.222(**)	.254(**)	.048	.057	.481(**)	.382(**)	.348(**)	1	-.130(*)
	N	340	340	340	340	340	340	340	340	340	215
Academic Performance	Correlation	.194(**)	-.001	-.334(**)	-.198(**)	-.254(**)	-.109	.007	-.144(*)	-.102	1
	N	254	254	254	254	254	254	254	254	254	254

Note: Sample below diagonal, non-sample above diagonal; \*\*p<.01; \*p<.05

**Table C6: T2 Bivariate Correlations**

		Neigh. Safety	Parental Efficacy	Hopeless	Suicide	Worry	Stress	Aggression	Substance Use	Sexual Activity	Antisocial Attitudes	Academics
Neighborhood Safety	Correlation	1	.235(**)	-.094	-.248(**)	-.124	-.127	-.718(**)	-.354(**)	-.334(**)	-.305(**)	-.012
	N	340	126	62	126	124	121	126	79	92	126	90
Parental Efficacy	Correlation	.191(**)	1	-.019	-.335(**)	.029	.003	-.307(**)	-.247(*)	-.213(*)	-.287(**)	.051
	N	340	340	62	126	124	121	126	79	92	126	90
Hopeless	Correlation	-.170(**)	-.152(**)	1	.126	.083	-.122	.073	.048	-.045	-.126	-.431(**)
	N	340	340	340	62	61	59	62	44	52	62	40
Suicide	Correlation	-.403(**)	-.024	.145(**)	1	.102	.342(**)	.426(**)	.397(**)	.302(**)	.295(**)	-.008
	N	340	340	340	340	124	121	126	79	92	126	90
Worry	Correlation	-.037	.028	.276(**)	.141(**)	1	.459(**)	.014	.191	-.002	.199(*)	-.138
	N	340	340	340	340	340	120	124	77	90	124	88
Stress	Correlation	-.118(*)	-.029	.209(**)	.236(**)	.379(**)	1	.227(*)	.424(**)	.145	.272(**)	-.030
	N	340	340	340	340	340	340	121	75	87	121	86
Aggression	Correlation	-.709(**)	-.292(**)	.192(**)	.428(**)	.001	.164(**)	1	.530(**)	.286(**)	.469(**)	-.031
	N	340	340	340	340	340	340	340	79	92	126	90
Substance Use	Correlation	-.536(**)	-.232(**)	.044	.312(**)	-.083	.031	.681(**)	1	.342(**)	.547(**)	-.229
	N	340	340	340	340	340	340	340	340	65	79	57
Sexual Activity	Correlation	-.416(**)	-.259(**)	.102	.260(**)	.005	.090	.551(**)	.546(**)	1	.330(**)	-.008
	N	340	340	340	340	340	340	340	340	340	92	94
Antisocial Attitudes	Correlation	-.469(**)	-.210(**)	.373(**)	.285(**)	.108(*)	.184(**)	.563(**)	.434(**)	.356(**)	1	-.091
	N	340	340	340	340	340	340	340	340	340	340	90
Academic Performance	Correlation	.043	.031	-.339(**)	.007	-.316(**)	-.113	-.035	.072	-.092	-.143(*)	1
	N	288	288	288	288	288	288	288	288	288	288	288

Note: Sample below diagonal, non-sample above diagonal; \*\*p<.01; \*p<.05

**Table C7: T3 Bivariate Correlations**

		Neigh. Safety	Parental Efficacy	Suicide	Hopeless	Worry	Stress	Aggression	Substance Use	Sexual Activity	Antisocial Attitudes	Academics
Neighborhood Safety	Correlation	1	-.316	-.062	.285	-.069	.221	-.525(*)	-.170	.223	-.069	.184
	N	340	21	20	12	21	20	21	14	17	21	8
Parental Efficacy	Correlation	.126(*)	1	-.005	.249	-.181	-.518(*)	-.079	-.261	.042	-.004	.590
	N	340	340	20	12	21	20	21	14	17	21	8
Suicide	Correlation	-.413(**)	-.084	1	.191	.398	.227	.445(*)	.448	.637(**)	.640(**)	-.016
	N	340	340	340	11	20	19	20	14	16	20	8
Hopeless	Correlation	-.288(**)	-.039	.264(**)	1	.030	-.291	-.336	.000	.542	.378	-.022
	N	340	340	340	340	12	11	12	6	10	12	5
Worry	Correlation	-.132(*)	-.061	.249(**)	.278(**)	1	.099	.524(*)	.596(*)	.386	.159	-.071
	N	340	340	340	340	340	20	21	14	17	21	8
Stress	Correlation	-.273(**)	-.095	.271(**)	.259(**)	.391(**)	1	.393	.138	.081	.068	-.383
	N	340	340	340	340	340	340	20	14	16	20	7
Aggression	Correlation	-.756(**)	-.198(**)	.503(**)	.279(**)	.117(*)	.254(**)	1	.527	.130	.409	-.242
	N	340	340	340	340	340	340	340	14	17	21	8
Substance Use	Correlation	-.590(**)	-.250(**)	.366(**)	.201(**)	.036	.268(**)	.664(**)	1	.447	.515	-.151
	N	340	340	340	340	340	340	340	340	11	14	4
Sexual Activity	Correlation	-.360(**)	-.216(**)	.289(**)	.044	.006	.167(**)	.448(**)	.579(**)	1	.416	-.003
	N	340	340	340	340	340	340	340	340	340	17	6
Antisocial Attitudes	Correlation	-.437(**)	-.137(*)	.375(**)	.493(**)	.126(*)	.256(**)	.483(**)	.435(**)	.289(**)	1	-.182
	N	340	340	340	340	340	340	340	340	340	340	8
Academic Performance	Correlation	.174	-.062	-.033	-.180	-.261(*)	-.152	-.027	.097	.018	-.117	1
	N	76	76	76	76	76	76	76	76	76	76	76

Note: Sample below diagonal, non-sample above diagonal;\*\*p<.01;\*p<.05

**Table C8: Measurement Model Standardized and Unstandardized Estimates**

.	Estimates	S.E	Est./S.E.	StdYX
EXTERNAL BY				
AGGRESSION	1.000	0.000	0.000	0.728
SUBSTANCES	1.038	0.089	11.668	0.912
SEX3	0.365	0.034	10.866	0.630
INTERNAL BY				
WORRY3	0.604	0.177	3.408	0.231
STRESS3	1.000	0.000	0.000	0.431
SUICIDE3	0.393	0.085	4.631	0.628
INTERNAL WITH				
EXTERNAL	3.925	0.872	4.502	0.656
STRESS3 WITH				
WORRY3	3.104	0.609	5.098	0.291
SUICIDE3 WITH				
AGGRESSION	1.010	0.214	4.718	0.197
Variances				
AGGRESSION	17.998	1.962	9.174	0.470
SUBSTANCES	4.404	1.523	2.892	0.168
EXTERNAL	20.297	2.944	6.896	1.000
INTERNAL	1.765	0.576	3.061	1.000
Residual Variances				
SEX3	4.099	0.367	11.173	0.603
WORRY3	11.380	0.913	12.458	0.946
STRESS3	7.716	0.710	10.868	0.814
SUICIDE3	0.417	0.066	6.322	0.605



**Table C9: T1 Mean Comparisons for Low vs. High Hopelessness**

		SS	df	MS	F	Sig.	Welch's t	Sig.
Neigh Safety	Between Groups	5.244	1	5.244	2.106	.148	1.823	.180
	Within Groups	841.435	338	2.489				
	Total	846.678	339					
Parental Efficacy	Between Groups	4.096	1	4.096	.299	.585	.246	.621
	Within Groups	4628.937	338	13.695				
	Total	4633.033	339					
Worry	Between Groups	23.031	1	23.031	1.447	.230	1.601	.209
	Within Groups	5381.438	338	15.921				
	Total	5404.469	339					
Stress	Between Groups	119.892	1	119.892	10.309	.001	12.281	.001
	Within Groups	3930.709	338	11.629				
	Total	4050.600	339					
Aggression	Between Groups	135.400	1	135.400	6.161	.014	4.726	.033
	Within Groups	7428.224	338	21.977				
	Total	7563.624	339					
Substances	Between Groups	16.754	1	16.754	1.901	.169	1.327	.253
	Within Groups	2979.151	338	8.814				
	Total	2995.905	339					
Sex	Between Groups	22.980	1	22.980	4.345	.038	3.932	.051
	Within Groups	1787.660	338	5.289				
	Total	1810.640	339					
Religion	Between Groups	.682	1	.682	.482	.488	.468	.496
	Within Groups	478.660	338	1.416				
	Total	479.343	339					
Extracur	Between Groups	.001	1	.001	.000	.988	.000	.988
	Within Groups	1459.914	338	4.319				
	Total	1459.915	339					
Peers	Between Groups	46.414	1	46.414	2.899	.090	4.098	.045
	Within Groups	5411.034	338	16.009				
	Total	5457.448	339					
Antisocial Attitudes	Between Groups	77.971	1	77.971	9.889	.002	8.500	.005
	Within Groups	2665.138	338	7.885				
	Total	2743.109	339					
Acadavg	Between Groups	1789.606	1	1789.606	4.596	.033	5.922	.019
	Within Groups	98116.732	252	389.352				
	Total	99906.339	253					

**Table C10: T2 Mean Comparisons for Low vs. High Hopelessness**

		SS	df	MS	F	Sig.	Welch's t	Sig.
Neigh Safety	Between Groups	26.140	1	26.140	7.183	.008	5.809	.017
	Within Groups	1230.125	338	3.639				
	Total	1256.265	339					
Parental Efficacy	Between Groups	55.724	1	55.724	5.632	.018	4.898	.029
	Within Groups	3344.195	338	9.894				
	Total	3399.920	339					
Suicide	Between Groups	2.948	1	2.948	3.667	.056	3.166	.078
	Within Groups	271.727	338	.804				
	Total	274.675	339					
Worry	Between Groups	199.656	1	199.656	13.593	.000	17.085	.000
	Within Groups	4964.513	338	14.688				
	Total	5164.168	339					
Stress	Between Groups	93.083	1	93.083	11.485	.001	12.183	.001
	Within Groups	2739.449	338	8.105				
	Total	2832.533	339					
Aggression	Between Groups	286.146	1	286.146	7.999	.005	6.837	.010
	Within Groups	12091.706	338	35.774				
	Total	12377.852	339					
Substances	Between Groups	13.618	1	13.618	.634	.426	.557	.457
	Within Groups	7261.102	338	21.483				
	Total	7274.720	339					
Sex	Between Groups	12.613	1	12.613	2.113	.147	1.815	.180
	Within Groups	2017.375	338	5.969				
	Total	2029.987	339					
Religion	Between Groups	5.792	1	5.792	4.591	.033	3.908	.050
	Within Groups	426.375	338	1.261				
	Total	432.167	339					
Extracur	Between Groups	4.038	1	4.038	1.127	.289	1.043	.309
	Within Groups	1210.594	338	3.582				
	Total	1214.631	339					
Peers	Between Groups	379.151	1	379.151	33.799	.000	49.789	.000
	Within Groups	3791.622	338	11.218				
	Total	4170.773	339					
Antisocial Attitudes	Between Groups	353.811	1	353.811	37.619	.000	39.737	.000
	Within Groups	3178.937	338	9.405				
	Total	3532.748	339					
Acadavg	Between Groups	4971.365	1	4971.365	17.592	.000	23.736	.000
	Within Groups	80820.382	286	282.589				
	Total	85791.747	287					

**Table C11: T3 Mean Comparisons for Low vs. High Hopelessness**

		SS	df	MS	F	Sig.	Welch's t	Sig.
Neigh Safety	Between Groups	48.738	1	48.738	10.831	.001	7.398	.008
	Within Groups	1520.941	338	4.500				
	Total	1569.680	339					
Parental Efficacy	Between Groups	6.083	1	6.083	.479	.489	.621	.432
	Within Groups	4289.803	338	12.692				
	Total	4295.887	339					
Suicide	Between Groups	7.717	1	7.717	11.434	.001	7.209	.009
	Within Groups	228.129	338	.675				
	Total	235.847	339					
Worry	Between Groups	168.897	1	168.897	14.566	.000	12.422	.001
	Within Groups	3919.268	338	11.595				
	Total	4088.165	339					
Stress	Between Groups	93.171	1	93.171	10.061	.002	7.974	.006
	Within Groups	3130.139	338	9.261				
	Total	3223.309	339					
Aggression	Between Groups	424.388	1	424.388	11.388	.001	8.372	.005
	Within Groups	12595.815	338	37.266				
	Total	13020.203	339					
Substances	Between Groups	68.861	1	68.861	2.627	.106	2.421	.123
	Within Groups	8861.424	338	26.217				
	Total	8930.285	339					
Sex	Between Groups	.777	1	.777	.114	.736	.117	.733
	Within Groups	2310.470	338	6.836				
	Total	2311.247	339					
Religion	Between Groups	.360	1	.360	.201	.654	.197	.658
	Within Groups	603.958	338	1.787				
	Total	604.318	339					
Extracur	Between Groups	1.624	1	1.624	.375	.540	.317	.575
	Within Groups	1462.639	338	4.327				
	Total	1464.264	339					
Peers	Between Groups	331.859	1	331.859	24.069	.000	40.457	.000
	Within Groups	4660.329	338	13.788				
	Total	4992.188	339					
Antisocial Attitudes	Between Groups	544.734	1	544.734	54.853	.000	54.676	.000
	Within Groups	3356.640	338	9.931				
	Total	3901.374	339					
Acadavg	Between Groups	254.758	1	254.758	.950	.333	1.032	.315
	Within Groups	19835.801	74	268.051				
	Total	20090.559	75					

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